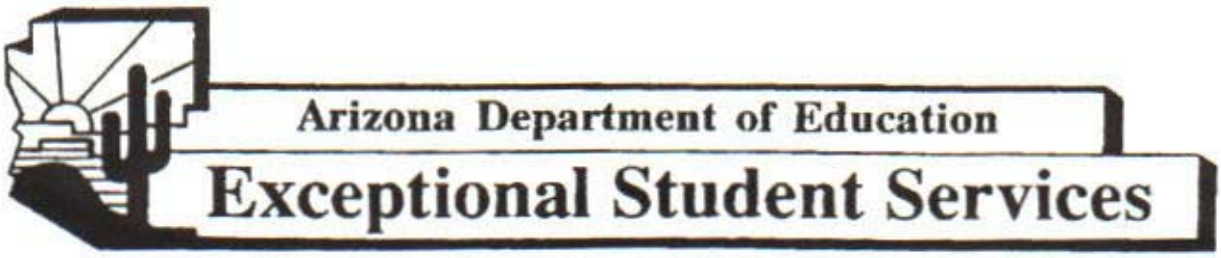
Education of Gifted Students In Arizona:

A Guide to Arizona Statutes, Model Services, Promising Practices, Resources



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A Guide to

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Published by the Arizona Department of Education

July 2001

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http://www.ade.az.gov/ess/Gifted

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Foreword

Recommendations from
The National Association for Gifted Children

The National Association for Gifted Children (*www.nagc.org)* provides compelling reasons, paraphrased below, for differentiated education, (i.e. modifications of curriculum), for gifted students:

Each individual has the need to learn at his or her own pace and to be provided challenges for learning at the level where growth proceeds most effectively. Schools, as an extension of our democratic social system, must provide an equal educational opportunity for all children. "Equal opportunity," for gifted students, means providing them with options that allow them to learn at their own rapid levels of development. A wide variety of complex learning experiences are essential to their development.

- Giftedness arises from interactions between innate capacities and environments that afford challenging opportunities and stimulating resources.

- Being thwarted, discouraged, and diminished as a person has physical and psychological consequences. To have ability you are never allowed to use can be devastating and traumatic.

- Gifted students often enter school having already mastered basic skills that other students must be taught. They may experience a sense of isolation when other students brand them as "different." When classroom structure and organization are not modified to provide appropriate instruction for them, they feel excluded from the classroom community.

- When given appropriately challenging learning opportunities, gifted students can use their vast knowledge as a foundation for unlimited learning. When the needs of the gifted are considered and the educational program is designed to meet those needs, their sense of self is enhanced and they make significant gains in achievement.

- Providing appropriate differentiated education for gifted children allows both individual and societal needs to be met

Note: National Association for Gifted Children standards can be found on the Arizona Department of Education gifted web site at http://www.ade.az.gov/ess/Gifted

Preface

What is giftedness?

Arizona statute requires schools to provide services to students who are gifted. The quality we call "giftedness" has many definitions. Like all children, those we identify as gifted have relative strengths and relative weaknesses. The critical difference between *all children* and *gifted children* is a difference in developmental level. Gifted learners may be described as having asynchronous development -- that is, they are developmentally advanced in one or more areas when compared to other children their age. It is important to have an understanding of the learning characteristics of gifted children in order to plan and provide appropriate educational programs for them.

Gifted individuals are thought to represent from three to five percent of the population at the upper end of the normal distribution curve. They are exceptional in the same way that children at the other end of the normal distribution are exceptional and thus require special services. Thoughts and behaviors of gifted children are sometimes many months, even years, ahead of most other children who are the same age. A gifted five-year-old child may be reading books, magazines and newspapers published for adults, and making perceptive observations about the content of these media. Yet this same five year old may act like any other five year old at bedtime. Another gifted child may be able to solve complex mathematical problems yet fit with age peers when it comes to challenges such as tying shoes, climbing trees or making friends on the playground.

Gifted children are often described as having common characteristics such as high levels of verbal and reasoning ability, curiosity, idealism, perfectionism, creativity, etc. Checklists of these characteristics are available in education literature. These common characteristics are sometimes grouped into areas such as thinking (cognitive) characteristics; emotional and social (affective) characteristics; and physical sensing and intuitive characteristics. Some experts mention the intensity or "overexcitabilities" of highly gifted children. A typical list of characteristics of gifted children appears in Chapter 1. The Gifted Student.

These varied and intense learning and social emotional characteristics of gifted children result in the need for special education in school. It is important to realize that gifted children are as different from average children as special needs children at the other end of the normal distribution are different from average children. Both groups of exceptional students at the extremes of the normal development curve need program and curriculum modifications because they learn differently and at different paces. The extreme differences in learning characteristics between gifted individuals and their age peers offer persuasive justification for the provision of special education for these exceptional children.

Are gifted children advanced in all areas?

Gifted children may not be advanced in all areas. Their asynchronous development suggests that the development is often quite uneven. In some academic areas, a gifted young person may be performing at a level several years above her or his chronological age; in other academic areas, his or her performance may be age-appropriate or even below expectations for age peers. And, while some gifted students may demonstrate social or emotional development that seems extraordinarily mature for their age, others may be very shy and withdrawn. Some gifted students have excellent self-management skills; others lack even minimal self-control.

Physical maturity is more elusive; it may be somewhat advanced, age-appropriate or even delayed. Many gifted children have difficulty with handwriting. Some experts in the field believe it is because eye hand coordination is slow when compared to the rapid rate at which the child's mind works. Poor handwriting may simply be a sign that the hand can't keep up with the rapid thoughts in the child's mind.

These different growth rates in physical, emotional, social, and intellectual maturation can be a source of great conflict for gifted individuals as well as pose challenges for their education. In addition, since most gifted students have very high expectations of themselves, their uneven pattern of development may be highly stressful and destructive to their self-esteem. Although the child is very bright and learns quickly, he may feel there is something wrong with him and may need reassurance from caring adults.

What variations are found within giftedness?

Among gifted children and adults, there are variations in individual strengths, interests, development, cultural background, economic background, physical abilities (or disabilities), emotional development, and more. Some children may be mildly gifted in one area, others may be moderately gifted, and still others may be highly or exceptionally gifted in one or more domains. Test scores plus observation and documentation of skills and behaviors will help advocates determine the modifications that are required for each individual student. The more highly gifted the child, the more "different" the child will be from other children, and, correspondingly, more provisions or accommodations in school will be needed.

It is possible to have gifted children who also have Attention Deficit Hyperactive Disorder or any of a number of other physical, learning, or behavioral disabilities. Such a child should receive special assistance for both giftedness and disability in his or her school. In cases where a high degree of giftedness is demonstrated, or in which a disability may be masked by giftedness, or ability obscured by disability, a school psychologist, private psychologist or other professionally trained diagnostician should be involved in assessment and educational planning for the child.

Do gifted children need special education provisions?

The extreme differences in learning characteristics between gifted individuals and their age peers are compelling reasons for the provision of special education for these students who rank at the high extreme of the normal curve. A gifted child often learns reading, math or other skills three or more years before these same skills are introduced in the standard classroom. These children need challenging learning materials and activities uniquely chosen for their particular set of skills. Educators who are familiar with the learning characteristics of gifted children, and who have training in curriculum strategies to address academic needs of these children, are necessary to plan and monitor educational services.

The common assumption that gifted children do not need special educational services or will "get what they need on their own" is a serious error. Although gifted children have extraordinary ability to learn, they may be inexperienced in learning strategies such as how to use the library, how to do a particular task, or how to construct the kinds of questions that will produce the help these students need from adults. They must have teachers and other adults willing and able to act as advocates and guides in their search for essential materials and resources.

Do gifted children have unique social and emotional concerns?

Due to their rapid learning abilities and the fact that they often spend large amounts of time waiting for other children to catch up, gifted children are at great risk for underachievement. If they do not find acceptance for their own style of learning or their own interests, or are repeatedly asked to "slow down", they may start to hide their giftedness from peers and teachers and thus underachieve. Peer pressure from other children who tease them may also cause them to hide or disguise their ability. They may lose the spark for learning that they had as younger children. They may become angry or depressed.

Social and emotional needs of gifted children are related to their advanced intellectual traits. For example, a child with advanced comprehension may criticize other children whose ideas seem silly to him; this child is not trying to be difficult or elitist; he simply doesn't know that all children do not think the way he does. His differences from others cause him to not "fit in". He will need a teacher to help him understand how he learns differently from others; for example, others need more time to practice skills, while he can use that time to learn new things. The understanding teacher will also help him to understand others and to realize that that he will lose friends if he criticizes others.

Why are many, varied options important?

Varied options within a program for gifted students are necessary to accommodate individual differences. Some gifted students may have exceptional abilities in one or a few domains, others may have exceptional abilities in many domains. Some have a physical or learning disability and require support services for both giftedness and disability. Some have been diagnosed as having attention-deficit hyperactivity disorder (ADHD), emotional or behavioral handicaps. Some need help with social skills in a regular classroom.

Some students may thrive in a program with an emphasis on logical, sequential reasoning in mathematical and language-based activities. Others require options with an emphasis on visual-spatial materials and processes. Cultural and linguistic diversity also must be honored. Although these differences among gifted students increase the complexity of planning appropriate educational programs, their special needs must be served.

Using the Resource Guide

It is important for those who work with gifted students to understand their unique learning characteristics in order to plan appropriate education and ancillary services for them. In addition to explaining the learning characteristics and needs of gifted students, this document outlines Arizona statute requirements, explains the many faces of giftedness, lists requirements for teacher selection, provides explanation of curriculum modifications for different types of giftedness, and discusses state and local funding and evaluation of gifted programs. In addition it contains a section on parenting gifted and a long list of resources, including Internet resources that will be helpful to educators and parents. It is our hope that readers will find this resource guide helpful in providing appropriate educational and ancillary services for gifted children, and will come back to it repeatedly for information.

Editors

Acknowledgments

The process of collecting information about Arizona State laws and rules, model programs, best practices, and resources for gifted education has been a collaborative effort. The following persons deserve recognition for their assistance.

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1. The Gifted Student

> *"Exceptional child" means a gifted child or a child with a disability."*
> (A.R.S. § 15-761.6.)
>
> *"Gifted child" means a child who is of lawful school age, who due to superior intellect or advanced learning ability, or both, is not afforded an opportunity for otherwise attainable progress and development in regular classroom instruction and who needs special instruction or special ancillary services, or both, to achieve at levels commensurate with his intellect and ability."*
> (A.R.S. § 15-761.7)

Title 15, Arizona Revised Statutes specifically includes gifted children among exceptional children –individuals who require differentiated educational services. The statute also requires that gifted children, "of lawful school age," shall receive "special instruction or special ancillary services, or both . . ."

In Arizona, "lawful school age" is defined by statute.

All schools other than high schools and evening or night schools shall, unless otherwise provided by law, admit children between the ages of six and twenty-one years who reside in the school district. A child shall be deemed six years of age if he reaches such age prior to September 1 of the current school year. (A.R.S. § 15-821.A.)

"If a kindergarten is maintained, a child shall be eligible for admission to kindergarten if he is five years of age. A child shall be deemed five years of age if he reaches such age prior to September 1 of the current school year." (A.R.S.§15-821.B.)

Therefore, services for gifted students are mandated at every level from K to 12.

Arizona statutes specify how "superior intellect or advanced learning ability" is to be determined

School districts in the state of Arizona shall provide screening for gifted pupils using one or more tests adopted by the state board as prescribed in section 15-203, subsection A, paragraph 22 and section 15-764. (For more information, see Chapter 2, Screening and Identification, and Appendix A).

School districts may identify any number of pupils as gifted *but shall identify as gifted at least those pupils who score at or above the ninety-seventh percentile, based upon national norms, on a test adopted by the state board.* (A.R.S.§15-770.1.) (emphasis added)

*Students **shall** be served who score at or above the 97th percentile on national norms in any one of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board approved list. **Students who score below the 97th percentile also may be served**. (R7-2-406A. 1.a.) (emphasis added). **School personnel also may use supplemental means of assessment for students who may have high potential that is masked by circumstances such as a disabling condition, lack of facility in English, cultural differences, or differences due to poverty or isolation*** (emphasis added)**.**

Definitions of Verbal, Nonverbal, or Quantitative Reasoning

Verbal reasoning refers to a student's ability in oral and written expression, reading and comprehension skills, and literal understanding and use of words. This reasoning also refers to how well students solve problems using words.

Nonverbal reasoning refers to a student's ability in spatial and abstract thinking. This reasoning also refers to how well students solve problems using shapes and figures.

Quantitative reasoning refers to a student's ability in understanding the elements of number theory, or the application and analysis of number problems. This reasoning also refers to how well students solve problems using numbers.

How is Intelligence Defined?

The definition of gifted given in Arizona state law is based on a psychometric theory of intelligence – i.e. that intelligence is an entity that can be measured on a norm-referenced test. Several problems are associated with this approach.

> Intelligence is a word that has been used for so long that we assume it is both tangible and a measurable entity like height or shoe size. In reality, the word is merely a convenient label we use to discuss observed behaviors.
>
> The psychometric definition removes intelligent behaviors from the context in which they take place and makes an assumption that cultural values and practices have no influence on them.
>
> In this approach, intelligence is measured on the basis of logical reasoning on verbal, quantitative, or nonverbal tasks that have a single correct answer on a test.
>
> Using this psychometric definition, a child who has superior intellect or advanced learning ability in areas other than language, mathematics, or logical nonverbal reasoning will likely not be recognized as gifted using this approach. A child gifted in art or music or leadership or creative problem solving (if he is not also gifted in language or math or spatial logic) will be missed in this approach. Children whose early experiences in cultures differ from our "test-taking" culture, will have an experiential disadvantage on psychometric tests and will not be recognized as gifted.

However, a local education agency need not define giftedness so narrowly. State Board of Education Rule 7 directs that **students who score below the 97th percentile also may be served.** Under this rule, each local education agency may, therefore, broaden its own definition of giftedness. This means that a district may include additional children other than those who score 97th percentile.

What are common characteristics of gifted students?

A gifted student frequently will exhibit one or more of the following characteristics:

- Exceptionally keen sense of humor – expressed in words, images, actions; humor may be appropriate or inappropriate by others' standards
- Intense desire to know, understand, create
- Passionate interest in a chosen subject/field, a personal commitment to excel and/or acquire enormous quantities of information. Interests may be fleeting and closure may be unnecessary
- Extraordinary ability to express meaning or emotion through words, actions, symbols, sounds, or other media
- Intuitive recognition of connections between seemingly disparate data; perception of deeper meanings without conscious awareness; possible inability to explain the processes that led to understanding. For example, "I don't know how I know."
- Curiosity --intense need to engage in probing explorations, make careful observations, experiment with objects, ideas, feelings, sounds, images, events and environments
- Outstanding ability to solve problems or bring order to chaos through inventing and monitoring possible paths toward a goal
- Enjoyment of challenge; fascination with complex problems or puzzles
- Unusual sensitivity to environmental phenomena, expectations of others, feelings of self and others, and needs of others
- Idealism; strong sense of justice which appears at an early age; altruism
- Remarkable ability to consider implications of actions or possible goals, to evaluate alternatives, to make reasoned decisions, and to engage in rich, highly conscious goal-oriented thought.
- Imagination – remarkable ability to develop ingenious ideas, processes, or products, to invent new ways of doing things
- Unusual ability to acquire, integrate, retain, retrieve, and use information or learned skills for a variety of purposes

- Unusual ability to acquire sophisticated understandings with amazing speed and accuracy -- seemingly with little effort

A comparison of differences between logical-sequential learners and visual-spatial learners can be found in Appendix F. More extensive lists of cognitive and affective characteristics of gifted students, can be found in some of the books listed in the reference section. In some cases, problems can be associated with the **intensity, frequency** or **duration** of some of these characteristics.

Through research, the "conventional wisdom" represented in checklists of characteristics is evolving into a theory-based approach to learning and behavioral patterns. One important theory that informs our understanding of the nature and characteristics of giftedness is Dabrowski's (1967) theory of overexcitabilities (OEs). This theory lends validation for the holistic nature of intelligence by including emotional, imaginational, sensual, psychomotor, and intellectual (or cognitive) functions as areas in which gifted children manifest observable differences from most of their age peers.

Dabrowski constructed his theory using neurological data that suggest that gifted individuals often exhibit heightened levels of physical energy, aesthetic sensitivity, intellectual curiosity, drive, empathy, imagination, and response to environmental stimuli. He posited that the five areas he described as apertures of psychic overexcitability or intensity may be viewed as a dimension of mental function.

Dabrowski perceived a potential for growth in intellectually gifted children because of this intensity in the way they make meaning through these give apertures: intellectual, emotional, imaginational, sensual, and psychomotor. Intellectual overexcitability, he posits, works in concert and in conflict with emotional and imaginational overexcitabilities in a growth process that forms the basis of highly creative intelligence. It is this intensity of gifted children's perceptions, awarenesses, thoughts, and feelings, according to Dabrowski and Piechowski (1977), that imbue talent with power and drive.

Each gifted individual will manifest a different pattern of OEs and, from time to time, different intensities. Although Dabrowski also theorized a stage-like progression for each OE, he posited that an individual could progress or regress through the stages depending on environmental influences and individual

Dabrowski's theory emphasizes some of the differences that occur among gifted individuals. These students also vary in several other ways such as level of intelligence, motivation, interests, educational background, cultural traditions, language development, and family composition. Each of these factors contribute to a gifted student's need for differentiated learning experiences.

Significant differences in levels of intelligence. When test scores are used as a criterion, gifted students are identified as those individuals whose scores are two or more standard deviations[1] above the mean of a normal distribution[1]. In a statistically normal distribution, slightly more than two percent of the population ranks two or more standard deviations above the mean with an "IQ" of 130 to 132. Only .13 of one percent of the population score above the third standard deviation.

Mildly gifted	115-6 to 129-31	13.59% of Population
Moderately gifted	130-2 to 144-7	2.1% of Population
Highly gifted	145-8 to 159-63	>.1% of Population
Extremely gifted	160-4 to 174-9	>004% of Population
Profoundly gifted	180 or above	>.0005% of Population

Highly gifted students have an exceptional need to acquire knowledge at a faster pace, to explore information in much greater depth. They often show incredible intensity, imagination, intellectual prowess, sensitivity, and emotion not typical of students in the general population. The child who is extraordinarily gifted differs as much from the moderately gifted child as the moderately gifted child differs from the child of average ability. These students need even greater modifications in their educational program. Due to their unique characteristics, highly gifted children are particularly vulnerable. Both they and their parents have special needs for assistance and support.

Many Faces of Gifted Students

Children with uneven patterns of ability. A common belief about gifted students is that they have the capacity to do well in every discipline. Many of them, however, may be highly gifted in one area, such as mathematics, and have average or even delayed development in other domains. There are much greater differences among subtest scores for students in this group than for members of any other group Full-scale scores can be misleading. A student's profile of strengths and weaknesses more accurately reflects his or her learning needs. A student who is highly gifted in mathematics, for example, needs extreme acceleration in that subject but may be appropriately placed in a regular classroom for other subjects. Through the use of individual profiles, better decisions can be made for appropriate educational programming.

Dual diagnosis, or gifted with a disabling condition. Gifted students who also have a disabling condition, are among the more complex students served in our schools. Gifted students who have one or more disabilities often use their intelligence to compensate for the disability. Their coping strategies may mask both the giftedness and the disability; thus, the twice-exceptional child may be viewed as average for his or her age. Aptitude-achievement discrepancies are one clue that further evaluation of a student is needed. Gifted students with disabilities must have appropriate challenges to nurture the development of their exceptional abilities plus appropriate interventions for their disabilities.

[1] For most commonly used aptitude tests, the mean is set at 100 and the standard deviation at 15 or 16. On the Scholastic Aptitude Test used for college entrance and Talent Search organizations, the mean is set at 500 and the standard deviation at 100. (See Appendix B for an illustration of a normal distribution)

Children who are under-represented, due to cultural, linguistic or economic factors.
These include children whose linguistic, cultural, familial, economic, or geographic experiences have not afforded them opportunities to acquire the kinds of knowledge measured by standardized tests. Gifted students can be found among recent immigrants, migrant workers, and non-traditional families, in every culture. Gifted students can be found in poverty-stricken areas, isolated rural areas, and urban ghettos. Identification of extraordinary ability must be made with processes sensitive to the kinds of problem solving abilities and characteristics appropriate to the environments in which they live rather than on the basis of a single test score.

Summary. To design and implement a flexible program with sufficient variety that affords challenging and stimulating learning opportunities for very diverse gifted students requires collaboration among teachers, parents, students, and other specialists.

School district personnel in the field of education of gifted students must collaborate with specialists from other programs so that gifted children from diverse groups can be provided learning opportunities commensurate with their abilities, and can receive support services in other areas of need.

2. *Screening and Identification*

Arizona state law mandates that local education agencies follow specific procedures in special education of gifted students

The governing board of each school district shall provide special education to gifted pupils identified as provided in section 15-770. Special education for gifted pupils shall only include expanding academic course offerings and supplemental services as may be required to provide an educational program, which is commensurate with the academic abilities and potentials of the gifted pupil. (A.R.S.§15-764-C)

*The governing board **may** modify the course of study and adapt teaching methods, materials and techniques to provide educationally **for those pupils who are gifted and possess superior intellect or advanced learning ability, or both, but may have an educational disadvantage** resulting from a disability or a difficulty in writing, speaking or understanding the English language due to an environmental background wherein a language other than English is primarily or exclusively spoken. Programs and services provided for gifted pupils as provided in this subsection may not be separate from programs provided for other gifted pupils, and may not be provided in facilities separate from the facilities used for other gifted pupils. **Identification of gifted pupils as provided in this subsection shall be based on tests or subtests that are demonstrated to be effective with special populations including those with a disability or difficulty with the English language**. (A.R.S.§15-764-D) [emphasis added].*

The Arizona State Board of Education has adopted the following rules.

Governing boards shall adopt policies for the education of gifted students which shall include:

Procedures for identification and placement of students to be placed in gifted programs.

*Students shall be served who score at or above the 97th percentile on national norms in any of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board-approved list**. Students who score below the 97th percentile also may be served.***

Local educational agencies (LEAs) shall accept, as valid for placement, scores at or above the 97th percentile on any State Board-approved test submitted by other LEAs or by qualified professionals.

The Arizona State Board of Education ruled that:

Each LEA shall provide the following information to all parents or legal guardians:

- *definition of a gifted child*
- *services mandated for gifted students by the state of Arizona;*
- *services available from the LEA;*
- *written criteria of the LEA for referral, screening, selection, and placement;*

Each LEA shall develop policies and procedures which ensure that parents or legal guardians are:

- *given the opportunity to have their children tested;*
- *given advance notice of the week that their children are to be tested;*
- *given the opportunity to withhold permission for testing.*

Each LEA shall:

- *make testing available for students K-12 on a periodic basis but not less than three times per year;*
- *inform parents or legal guardians of the results of the district administered test within 30 days of determining the test results;*
- *upon request, explain test results to parents or legal guardians.*

(Rule 7-406.3)

Two requirements emerge from the above statutes and rules:

1). Students who score at or above the 97th percentile on a state-approved test in verbal, nonverbal, or quantitative reasoning **shall** receive special education services.

2). Students who may have an educational disadvantage – cultural, linguistic, disability, or environmental – must be identified based on tests or subtests that have been demonstrated to be effective with special populations.

The first requirement could be implemented quite easily if all children were alike and if all approved tests were perfectly reliable. Arizona educators should not rely **solely** on test scores for the identification of gifted. As neither condition is attainable, Arizona educators cannot rely solely upon test scores for the identification of gifted children.

The second requirement suggests using different tests for different populations. At this time, no tests have been demonstrated to be effective with all populations. Educators will select from a list of approved tests to find the one that works best for a particular child or group of children. Use non-verbal tests for children who are just learning English. Educators can gather data from a child's family about outside interests and activities as well as from teachers about classroom performance and motivation as additional documentation of possible giftedness.

A Multifaceted Approach for Identification

Purpose

To identify gifted students "who due to superior intellect or advanced learning ability, or both, are not afforded an opportunity for otherwise attainable progress and development in regular classroom instruction and who need special instruction or special ancillary services, or both, to achieve at levels commensurate with their intellect and ability."

Charge

To develop procedures for assessment sufficiently sensitive to diversity among children in Arizona that all students, "*who due to superior intellect or advanced learning ability . . . need special instruction or special ancillary services*," will be identified for those services.

Guidelines

- Arizona state law requires that the identification process include assessment with one or more of the tests approved by the state board of education. However, the identification process should include multiple criteria for documenting a student's potential for exceptional performance.

- The assessment of students' strengths and talents should be an ongoing process rather than a one-time opportunity. Appropriate educational services for gifted students must be provided whenever need is demonstrated.

- Information about students should be obtained from multiple sources such as parents or other caregivers, teachers, peers, community members, the students themselves, school records, or other documentation of students' talents and strengths.

- The identification process must include procedures for alternative means of assessment for students who may have learning or sensory disabilities, physical disabilities, lack of facility in English, cultural differences, differences due to poverty or isolation, or other conditions that may mask intellectual strengths.

- Identification should be accomplished as early as possible in a child's school career. Early identification is essential so that early intervention can be provided to enable healthy intellectual and emotional development of gifted students.

- Assessment and testing should be used for the acquisition of diagnostic information essential for the provision of appropriate educational services, not just as a means of identification.

- Placement in a program for gifted students must be recognized as an educational intervention necessitated by exceptional needs. Special education for gifted students must never be viewed as a reward for good performance or as a privilege that can be withdrawn.

The Identification Process

> *Each local education agency shall establish procedures through which students with high intellectual abilities or strengths in one or more disciplines are identified for special services.*

The design of an identification process must be compatible with the kind of programming options that will be provided to gifted students in the district. For example, different procedures will be used to select students for an accelerated mathematics program in a secondary school setting than would be used to identify gifted kindergarten students for placement in self-contained classes or magnet schools.

Purpose

One purpose of the identification process is to conform to Arizona statutes. Other purposes of identification would be derived from local need and LEA philosophy. Questions to guide this process include:

What is our definition of gifted?
What kinds of "gifts" (e.g., academic, artistic, creative) will we serve?
When, where and how will services be provided?

Structure

Once the purpose is clearly formulated, the structure or framework of the identification process is considered. One key component of the process is the collection of data about students who may require special services because of intellectual ability. Another is the system for decision-making. A third is determining what will be done to ensure that potentially gifted students, who may require intervention services, are not overlooked because of a disabling condition, linguistic difference, poverty, or cultural difference.

Model Cases

Many model cases (examples) are available in the literature of the field. District and school personnel may choose to adopt a model, adapt a model to reflect local conditions, or create a new design uniquely suited to the population served and goals of the LEA and the program for gifted students. Once the identification design is complete, the procedures should be published, furnished to each district school, and made readily available to parents or guardians.

Identification Process Design

In the following design three major steps are included; informal data collection, formal testing, and evaluation of data for decision-making. Informal data collection includes nomination and screening to locate those students who may have "superior intellect or advanced learning ability or both."

Nomination

Analogous to a referral made by a teacher, a parent or guardian, a peer, an individual who believes s/he meets the qualifications, or by anyone who knows a student's capabilities, nomination is one entry to consideration by the district identification team(s). Nomination forms may include checklists, open-ended questions or both. Some districts also choose to include a permission to test section on their parent nomination forms. Examples of nomination forms are in Appendix C.

Checklists

Checklists are made up of a list of characteristics that are ascribed to highly intelligent students. Some are designed with a Likert-type scale or a ranking scheme so that a numerical score can be derived from the information provided. The reliability of a checklist can be affected by several factors:

- Each rater's schema for completing a checklist is personal.
- Rankings are limited to the characteristics or behaviors listed.
- Listed characteristics or behaviors generally are not applicable to non-typical gifted individuals.
- Checklists are easily skewed or biased for or against a candidate.
- Checklists do not allow a rater to describe the qualities or behaviors that led him or her to nominate a candidate.
- If a checklist is very long, a rater may not take the time necessary to consider each item.

Open-ended Questions

Nomination forms may include open-ended questions, e.g. " What have you observed that led to your decision to nominate student name?" which then allow a nominator to provide anecdotal or descriptive evidence of a nominee's advanced intellectual development or personal qualities. Responses to open-ended questions may supply richer, more contextual data than do checklists. However, comparison of children on the basis of extremely varied responses is virtually impossible. Responses to open-ended questionnaires may be affected by several factors:

- Some responses are succinct; others are rich in details.
- The educational levels and linguistic abilities of nominators may vary widely.
- Values of his or her culture influence the ways a nominator responds to questions.
- Nominators may not respond to all questions.

Nomination checklists or questionnaires should be used primarily as a source of data for inclusion, as a part of the documentation collected for review by members of the selection or placement team. No attempt should be made to quantify data derived from these documents.

Screening

Screening is sometimes described as casting a wide net in the search for students who may be gifted. Screening includes review of a variety of data sources (e.g., standardized achievement or readiness tests, grades, student products, portfolios, nomination forms, teacher-parent-student surveys and out-of-school achievements) that document past performance. Other data may be gathered through classroom observations conducted by school personnel and/or via interviews with students, parents, or other persons who have knowledge of a child's abilities.

Screening may also include classroom tests or alternative assessments administered to all students in a classroom setting, Students who are potentially gifted based on the screening are then referred for further testing on a test from the state approved test list.

Notification of parents or guardians by the LEA of the intent to test/assess their child

The school shall provide notification of parents' rights, as listed below, in the parent/school handbook. A formal letter should be prepared by each LEA to be sent to parents or guardians of all students who were discovered through the nomination – screening that their students are candidates for entrance into the program for gifted students. By state mandate, the letter should include:

- the assessment/testing schedule, listing the week that testing will be done
- the testing or assessment instrument(s) that will be used,
- notice that the parent has a right to refuse special assessment/testing,
- alternative testing/assessment dates, and
- a form requesting the signature of the parent or guardian to document that permission to test their child(ren) is granted.

Examples of letters and a permission to test form can be found in Appendix D.

Testing

By Arizona statute, LEAs must administer one or more state approved tests as an integral part of the identification/assessment process. Tests have value for assessing student needs and for planning appropriate educational interventions for exceptional students. However, the exclusive use of any one test as the sole criterion for identification of giftedness is not best practice.

Testing and assessment instruments are imperfect predictors of intelligence, ability, achievement, or educational progress for any individual. When the students being assessed lack facility in the English language, have grown up in different cultural environments, or have a disabling condition, the problem is compounded.

In the testing phase of the identification process, the following procedures may act as a counterbalance to some of the bias inherent in norm-referenced tests.

- Use varied tests; no one test is suitable for all students and no decision to include or exclude a student from gifted program services should be made on the basis of only a test score.

- Be aware that a non-verbal test (e.g., Raven, NNAT, MAT), although it may be more appropriate than a language-laden test for linguistically or culturally different students, provides a score in only one of the three areas mandated by law. Students' strength in verbal or mathematical areas will not be discovered through use of a non-verbal test.

- Provide assistive technologies and/or individual assessments for students who have motor, vision, or hearing disabilities, etc.

- Use other forms of assessment (e.g., creativity measures, interviews, performance, student products) to gain information that cannot be derived from a score on a state approved test.

- Use qualified personnel to administer, score, and interpret tests. Qualifications include:

  - Understanding of measurement principles and ability to evaluate the technical claims (e.g., reliability, validity, ceiling) of a test;
  - Knowledge of the appropriate uses and limitations of a test;
  - Ability to employ procedures to reduce bias in test selection, administration, and interpretation;
  - Understanding of the limitations of a test when used with children who may be physically or educationally disadvantaged; or challenged in other ways.
  - Cognizance of current research in the fields of tests and measurements and education for gifted children.

- Set up testing situations that do not hinder students' performance. Students should feel comfortable, relaxed, and at ease with the examiner.

- Document sub-test scores as well as full-scale scores.

- Notify parents promptly of the results of testing

- Establish a procedure for parents or guardians to have test results interpreted. Note that parents should not see the actual test protocol, but may be shown some of the sample questions. If in doubt about how to interpret test results to parents, consult the school psychologist for assistance.

- A record of the student's test date, test used and scores should be placed in the child's cumulative folder for record keeping, and curriculum planning information for teachers.

- It is advisable to wait some time before testing the child again on the same test; however, another test could be used to re-test or test the next year. If the same test is used to re-test, see the examiner's manual to be sure that the proper amount of time has elapsed prior to testing.

What explains the identification design?

This question is often overlooked; yet the answers are critical in an evaluation of special education for gifted students. Evidence provided through such an evaluation is useful for responding to criticism inside and outside the school, to advocate for gifted students, and to avert efforts to eliminate special services for gifted students.

Ongoing evaluation of the identification process will include questions such as the following:

- How effective is the identification process in locating the students who need special services to support their intellectual development?

- What modifications or changes would improve its effectiveness?

- Which educational interventions are most effective in providing the support needed by identified gifted students?

- What evidence will be most compelling for use by advocates of special education for gifted students?

- What evidence will be most valid and provide the best representation of the strengths and limitations of the program?

3. *The Teacher*

The gifted endorsement shall be required of all State Board certified teachers of the gifted or those individuals serving as resource teachers, specialists or in other similar positions with the gifted. This endorsement shall also be required of State Board certificated teachers whose daily instructional contacts include a majority of students gifted in that area of instruction." (R7-2-603.J.1.2)

Level	**Requirements** (Revised 3/99)
Provisional Teacher of the Gifted Endorsement Valid for 3 years Not renewable	• Possession of a valid Arizona elementary, secondary, or special education certificate • Completion of nine semester hours of upper division or graduate level courses in an academic discipline such as science, mathematics, language arts, foreign language, social studies, psychology, fine arts, or computer science. • **AND ONE (1)** OF THE FOLLOWING: • Two years full-time teaching experience in a classroom or special program in which most students were gifted in that area of instruction • Ninety (90) clock hours of in-service training in gifted education • Six semester hours of course work in gifted education
Regular Teacher of the Gifted Endorsement	• Possession of a valid Arizona elementary, secondary, or special education certificate • Completion of 9 upper division or graduate hours in an academic area such as science, mathematics, language arts, foreign language, social studies, psychology, fine arts, or computer science. • **AND TWO (2)** OF THE FOLLOWING: • A minimum of 135 clock hours of verified in-service training in gifted education. • Completion of 12 semester hours of courses in gifted education. District in-service programs designed for professional development may be substituted for up to six semester hours of gifted education courses. Fifteen (15) clock hours of in-service is equivalent to one semester hour. In-service shall be verified by the district. Practicum courses shall not be accepted toward this requirement. • Completion of six semester hours of practicum or two years of verified teaching experience in which most students were gifted (verified by letter from District Superintendent or Personnel Director)

Note:
(A list of skills recommended for teachers of gifted students is in Appendix H.)

Selection of Teachers for Gifted Students

Perhaps the most important decision a local education agency can make to ensure the success of special education for gifted students is selection of the teacher(s) who will work with them. Training and disciplinary knowledge are important, but the most critical factor is the teacher's own self-concept. A teacher's positive sense-of-self contributes more to student success than any other factor. The most important element in teaching-learning relationships is less what a teacher knows than how the teacher acts.

Effective teachers will vary almost as much as the gifted students they teach, but three characteristics seem to be critical: 1) a strong self concept – accepting one's own strengths and limitations, a "sense of self" that facilitates planning, decision making, implementation, monitoring, and 2) evaluation of problem solving; interpersonal intelligence – the ability to recognize the feelings of others and to understand, act on, or shape others' feelings or attitudes; and 3) the ability to create a learning context in which complex problem solving is supported and cognitive complexity can thrive

Teachers of gifted students need not be gifted in the same ways their students are gifted. Instead, they need personal attributes and organizational skills that contribute to student development. Generalists should have a broad base of knowledge, awareness of the relationships among varied disciplines, and the abilities needed to sustain productive interaction among gifted students. Specialists in an academic discipline should have in-depth knowledge of the subjects taught, ability to model methods that allow students to expand knowledge within the discipline, enhance their abilities to make connections to other disciplines, and solve real world problems. Both generalists and specialists should genuinely like and respect gifted students and be committed to their role as advocates.

Teacher as Facilitator of Learning

Gifted students need a teacher who can guide or facilitate their intellectual and personal development. Planning activities that contribute to students' self respect, respect for others, and sense of competence are more important than dispensing information that students can easily acquire on their own – or already know. Opportunities for students to learn executive processes such as planning, decision-making, evaluation, synthesis, and creative production are essential to the development of mental self-management and executive processes of recognizing opportunities, finding problems, and directing a search for solutions.

Because most gifted students learn rapidly and easily, they may not have developed strategies for dealing with difficult tasks. Teachers should aid students in the acquisition of effective learning strategies and suggest alternative paths toward the learning goal. Helpful tips and encouragement promote cognitive growth and a sense of competence far more than explicit directions or criticism.

Effective teachers of gifted students have broad knowledge of curriculum areas, enthusiasm for the subjects that will be studied and the ability to make the subjects come alive. They will pose complex questions and problems that encourage exploration of ideas, then encourage students to discuss alternative answers. They involve students in planning classroom projects, implementing the plans, and evaluating the outcomes. An effective teacher freely acknowledges errors or gaps in information, learns from students who may have a greater knowledge of a topic, and models self-evaluation.

Guidance and Counseling Aspects

The effective teacher knows students as individuals, respects their strengths, and helps them cope with limitations. The students know that their teacher believes in their abilities and genuinely likes them. Teachers of gifted students understand and accept their students' gifted characteristics and assist them to understand and accept their giftedness. Activities designed to help students develop affective strategies for working with others in the school and community must be an integral part of the gifted education program. Among the skills students can learn are strategies for managing conflict, managing their time, working through disappointments, improving communication with others, coping with stress and being different. In a curriculum developed for gifted students, teachers include and embed affective objectives in the curriculum. Students will have frequent opportunities to openly discuss issues, listen to each other's ideas and share differing points of view while they are working on academic standards.

At times, individual gifted students may ask the teacher for guidance with a personal problem. Sometimes, being a sensitive listener is sufficient; at other times, the student may need reassurance or help working toward a solution. In serious situations teachers may need to consult with a school counselor or psychologist.

Research Aspects

Sources of information about gifted students, curriculum modifications, special programs, competitions, and related subjects are readily available on the Internet, in journals and books, and from corporate or nonprofit groups. Teachers, like their gifted students, can conduct investigations in areas of interest and model methods for conducting research in a given discipline. Like their gifted students, teachers will need to evaluate the quality of information and reliability of sources, analyze the data gathered, and synthesize data into a coherent form ready to be used and shared with others. A teacher, who works with gifted students must always be a learner – a highly able participant in the learning environment with skills that facilitate optimum cognitive and affective development of gifted learners.

Summary

The way a teacher behaves has a profound effect on classroom climate and on the ways that students behave with others. Effective teachers model behaviors that promote growth among students and encourage students to practice similar behaviors. They plan opportunities to promote cognitive growth, self respect, respect for others, self-esteem and self-efficacy, development of a sense of responsibility for one's own conduct, and a sense of commitment to one's own goals.

Teachers of gifted students must be realistic about the amount of work it takes to provide rich learning opportunities. They must be willing to accept the workload that a gifted program entails. A teacher of gifted is also an informal in-service specialist to other teachers in the school, consultant to parents, part-time counselor and full time advocate for the students. The role is cognitively challenging, physically and emotionally demanding, time-consuming, and constantly evolving. At the same time it is extremely rewarding to see gifted students rise to various challenges.

4. Programs and Services

Arizona state law mandates:
The governing board of each school district shall provide special education to gifted pupils identified as provided in A.R.S. 15-770. Special education for gifted pupils shall only include expanding academic course offerings and supplemental services as may be required to provide an educational program that is commensurate with the academic abilities and potentials of the gifted pupil. (A.R.S. ' 15-764.C.)

The governing board of each school district shall develop a scope and sequence for the identification process of and curriculum modifications for gifted pupils to ensure that gifted pupils receive special education commensurate with their academic abilities and potentials. The scope and the sequence shall:

2. *Include an explanation of how special education for the gifted differs from regular education in such areas as: (a) Content, including broad based interdisciplinary curriculum; (b) Process, including higher level thinking skills; (c) Product, including variety and complexity; (d) Learning environment, including flexibility.* (A.R.S. ' 15-770.A.2.)

Governing Boards shall adopt policies for the education of gifted students which shall include:

2. *Curriculum differentiated instruction and supplemental services for gifted students.*
   (a) Expanded academic course offerings may include, for example, one or more of the following: acceleration, enrichment, flexible pacing, interdisciplinary curriculum, and seminars; (b) Differentiated instruction which emphasizes the development of higher order thinking may include critical thinking, creative thinking, and problem solving skills; (c) Supplemental services which may be offered to meet the individual needs of each gifted student may include, for example, guidance and counseling, mentorships, independent study, correspondence courses, and concurrent enrollment. (R7-2-406.A.2.)

The scope and sequence shall be a written program description which demonstrates articulation across all grades and schools to ensure opportunities for continuous progress and shall include: (a) Statement of purpose; (b) General population description; (c) Identification process and placement criteria including provisions for special population; (d) Goals and objectives; (e) Curriculum differentiated instruction and supplemental services; (f) Program models; (g) Time allocations for services (h) Procedures and criteria for evaluation of student and program outcomes. (R7-2-406.4.)

Differentiating Curriculum for Gifted Students

The *Arizona Academic Standards* are the foundation curriculum for all students in the state. Modifications in learning environment, content, processes, and products, ***to provide an educational program that is commensurate with the academic abilities and potentials of the gifted pupil,*** are decreed by state law. An essential first step, then, is an assessment of gifted students to determine which *Arizona Academic Standards* they have already met. With that information, standard district curriculum can then be compacted in the following ways to adjust appropriately for the gifted student.

- Skip standards already mastered, and replace with other subject matter content
- Incorporate standards and objectives from higher levels so that gifted students will have opportunities to extend their mastery of required standards
- Pace instruction faster for rapid learners

In addition to curriculum compacting and accelerated pacing, curriculum for gifted students should be **differentiated in** learning **environmen**t, **content** studied, **processes** used, and **products** developed.

Environment Modifications

Open. The learning community is dynamic and open to change; exploration and experimentation is encouraged, and learners are free to change direction or classroom procedures when they encounter an obstacle to their progress toward agreed-upon goals. The classroom is open to new ideas, new people, new materials, and new methods. The physical environment and classroom schedule frequently is altered to suit the learning activity or to accommodate unexpected events. The environment has a focus on divergence. The teacher encourages students to accept their differences and adjusted learning goals. Thus, gifted students' learning goals, assignments and learning outcomes will be different --adjusted to reflect greater complexity or breadth or the student's own interests.

Learner centered. Teacher and students form a learning community in which a balance between state-mandated curriculum and students' ideas and interests is maintained. Teacher talk is de-emphasized, discussion is facilitated, and students are encouraged to contribute ideas and reflect on ideas of others. The discussion leader usually, but not always, is the teacher. Sometimes a community member may be asked to lead a discussion or seminar; sometimes a knowledgeable student might lead the group in its work. Sometimes the teacher might structure debates in which each team presents differing points of view. The teacher acts as coach and facilitator rather than constant lecturer or authority figure.

Values independence. Freedom of choice is emphasized and initiative is encouraged. Students are taught to develop independent planning and decision-making skills, strategies for self-management, and processes for organizing materials and ideas. The community of learners jointly constructs classroom rules and implement classroom routines. The dimension of independence also includes academic choices: students have choices of what to learn, how to learn, how to demonstrate mastery, and how to evaluate their own learning and/or progress toward goals. Students also learn strategies for conflict resolution and processes for solving many of their own interpersonal problems rather than relying on an adult to impose a solution.

- Allows movement. Within the school or charter policy guidelines, students have freedom to move about the classroom and the school to consult with others, to collect data from a variety of sources, and to gain access to a variety of human and physical resources. This also applies to an administrative arrangement where the student moves to another classroom or school for part of a day to participate in more advanced instruction in an area of strength.

- Accepts student ideas. Students practice basic skills of productive discussion. Students know that their ideas will be encouraged and accepted as worthy of consideration. Members of the learning community will listen attentively, and try to understand rather than contradict a point of view. In the process, students' ideas will be clarified, restated, or elaborated. The idea originator may be asked to offer support -- reasons, facts, or details, to suggest further uses of the idea, or consider implications of the idea and its associated actions. Probing or challenging questions follow when a spirit of mutual respect has been established. Evaluation emphasizes positive qualities of an idea/project and constructive suggestions for improvement. With their high standards for themselves, gifted individuals **do** like constructive suggestions for improvement. Receiving a paper marked with only a grade, even an A, does not help them to move toward higher levels of excellence.

- Is flexible. Gifted students vary so much from each other that flexibility in the learning environment is necessary. Flexible structure provides a framework for exploring, investigating, creating, experimenting, and researching widely varied topics, problems, and data. The structure provides "rules of the road" that allow student to interact with each other, learning materials, and others in the school without constant fear of "collisions" or "traffic tickets." The structure in a classroom for gifted students should allow many paths by which students may attain their goals.

  Flexibility can be provided through

  - willingness to change furniture arrangements,
  - willingness to involve students in planning learning activities,
  - willingness to include events that occur outside the classroom as discussion subjects
  - willingness to change routines,
  - individual learning plans (ILP) or individual service plans (ISP)
  - use of varied learning centers,
  - increasing or decreasing time for individual projects or problem solving.

- Uses fluid grouping. Some activities require the cooperation of all members of a learning community; some are accomplished best by a small group of students, and others must be done individually. The following elements contribute to successful collaboration:

  - Groups are *ad hoc* -- formed for a specific project and a limited period of time.
  - Groups have three to five members for most projects.
  - Students choose to become a member of a particular group based on interest in the topic to be explored or the objective to be attained.
  - Students receive instruction or have experience in group dynamics.

Modification of grouping arrangements allows each student to work in his or her preferred learning mode, to learn effective interaction skills, to see themselves in relation to other group members, and evaluate individual contributions to group goals.

- Uses complexity. This dimension includes physical aspects of learning space, information resources, production resources, and structural arrangements. Learning spaces should be comfortable and arranged to allow varied activities to occur simultaneously. Learning materials must be varied, include complex, high-level content in formats suitable for different learning styles. A wide variety of production supplies and equipment is important to allow gifted students to work in areas of strength and preferred formats. Computers, cameras, VCRs, and various kinds of art and science materials and supplies are helpful. As gifted students are expected to perform complex intellectual tasks, their learning environments must contain multiple complex resources necessary for successful completion of complex tasks.

Content Modifications

Gifted students, due to their advanced intellectual abilities, require complex concepts, strategies, and more varied information organized to evoke higher levels of thinking. Content should include concepts and generalizations central to each discipline. The varied disciplines can then be integrated through the use of broad themes that promote deep understanding of the interrelationships among fields of knowledge. Content modifications may include any of the following:

- Breadth. Gifted students may have interests in widely diverse fields of study. Content should be selected to broaden and deepen student interests, enhance motivation, and explore different methods, materials, and tools in many disciplines. Through varied content options, within an integrated and interdisciplinary thematic unit, gifted students have greater opportunities for finding areas of interest that lead to more in-depth understanding of a topic or issue.

- Complexity. Interrelated concepts and ideas require gifted students to engage in analysis, evaluation, decision-making, and similar executive thinking processes. Approaching curriculum from the larger problem or question or hypothesis produces complexity. Working with complex issues enables gifted students to develop the depth of understanding necessary for original research and creativity needed for future careers.

- Abstractness. Gifted students seldom need much time to acquire information at the factual level. They do need time to reflect upon abstract ideas, concepts, and generalizations that enable them to make sense out of the information they have acquired.

- Study of people. Gifted students have an intrinsic interest in how people think and feel, how they create, how they interact with others, and how they deal with their problems. Learning about people who have influenced history in the field, or in the world, may facilitate the development of gifted students in their own domains of strength and interest. The study of people can be incorporated easily into any discipline and could include discussion of: some of the following topics:

- How successful gifted/creative adults solve their unique problems
- How to resolve conflicts between self-expectations and the expectations of others
- How gifted individuals react to fame, failure, rejection, negative criticism
- How success is viewed by the individual or by others in society

- Study of methods. Each field of inquiry has a systematic approach to research-- methods for the collection and classification of data, analysis of data, derivation of generalizations, principles, and laws, testing hypotheses, and rules of evidence for validating conclusions. Gifted students who have an intense interest in a field must practice these methods.

- Organization to enhance learning. The importance of integration of knowledge for gifted students cannot be overemphasized. Students need to consider implications of knowledge, discover how to use knowledge from one field to solve problems or design products in another field, and how to interpret knowledge or make connections to a new context. For example, grammar consists of patterns. All languages have structural patterns. Other disciplines have organizational patterns and systems as well. An organizational model within a discipline helps gifted students to think more globally, discover connections among other bodies of knowledge and ask the kinds of questions that lead to in-depth understanding.

Process Modifications

Among curriculum modifications recommended for gifted students, processes of thinking and learning are those most often implemented, discussed, and researched. Gifted students, who are often already experts in knowledge acquisition and information processing, require these high level process modifications to develop their executive thinking skills and create quality products.

- Higher levels of thinking. Several models exist in which thinking is categorized. Some, like the *Taxonomy of Educational Objectives*, are hierarchical and range from simple to complex. Others are organized by steps or operations. The critical feature of this modification is that information is to be used for complex reasoning, rather than simply acquired and stored for retrieval. Recommended higher level thinking processes for gifted students include:

  - Analysis -- separating or breaking a whole into its constituent parts to discover their nature, proportions, functions, relationships to other parts, etc.
  - Evaluation -- determining the worth of something; appraising value.
  - Synthesis -- putting together parts or elements to create a complex whole.
  - Problem finding -- recognizing/identifying an underlying problem.
  - Problem solving -- following a series of steps to determine objective(s), find facts, identify the underlying problem(s), generate alternative solutions, and select the best solution.
  - Decision making -- describing the issue/problem clearly, generating alternatives, determining criteria for evaluation of alternatives, selecting best alternative, and supporting choice.
  - Planning -- preparing a detailed series of steps for accomplishing a task -- clear statement of goal, resources needed, step-by-step sequences of activities, methods to detect potential problems, alternative paths to the goal.
  - Deduction -- reasoning from a known principle to an unknown or from a premise to a

logical conclusion.

- Induction -- reasoning from particular facts or individual cases to a generalization.
- Creative thinking -- generating many, varied, unusual ideas and adding to ideas -- fluency, flexibility, originality, and elaboration.
- Predicting/Forecasting -- Evaluating cause and effect sequences and, based on results, deciding on the most likely outcome(s).

- Open-ended approach. This modification for gifted students implies much more than merely posing questions without a "correct answer". The concept of open-endedness shifts a teacher's role from instructor to facilitator of a learning group. The teacher may supply the problem but the students supply the thinking. Students' unique contributions and thinking are highly valued, and students' leadership in discussion and/or idea generation is promoted. For a high school literature unit titled "Man's Search for Meaning", for example, students might read a variety of authors like Camus, Kafka, and Victor Frankl, for contrasting viewpoints, then discuss, analyze, synthesize and come up with varying interpretations and conclusions. There will be no "correct" interpretation. Rather, a student's ability to support personal thinking with reasons is stressed. The approach requires differences in learning activities design, learning resource selection, questioning techniques, question content, and holistic evaluation of student responses.

- Discovery. In the process of discovery learning, students will use both primary and complex mental processes. In an active inquiry, students will collect data through observation, look for patterns among the data, make predictions about how the data fit together, and draw conclusions. Teachers facilitate discovery learning by teaching strategies for inquiry, providing just enough structure to preclude frustration, and selecting materials carefully. Most discovery processes include the following basic steps:

  - A doubt, concern, or question about a decision, problem, object, or phenomenon
  - Problem formulation or goal clarification
  - Hypothesis formulation
  - Definition of terms and clear conceptualization of the problem or phenomenon to be investigated
  - Collection of data
  - Analysis and evaluation of data
  - Testing hypothesis
  - Deriving conclusions and/or generalizations

- Evidence of reasoning. Whenever students derive conclusions through a thinking or problem solving process, they also communicate the reasoning or logic they used to arrive at their conclusions. They benefit from hearing the ways in which another student thought. Hearing others express reasoning at a slightly higher level than their own adds to students' understanding of the process; interaction with intellectual peers strengthens the development of skills. And, working through reasoning strategies strengthens metacognitive processes.

- Group interaction. Group-building activities are essential in a program for gifted students. These can range from simulated social situations to serious discussions about issues related to their giftedness and relationships in the larger society. During group interactions, gifted students practice discussion skills, reach consensus, make decisions, improve participation attitudes, and reflect on group processes. Any activity that includes group collaboration, self-analysis, and critique from others can enhance students' abilities to work with others. When students work together on a project, each student's contribution should be evaluated individually. Group grades do not adequately reflect the work of individual group members.

- Variety. Gifted students need to learn and use a wide variety of thinking processes and learning procedures. They also need a wide variety of information resources. Students need not all do the same thing at the same time or in the same way. The curriculum should include a number of options for study; students should be able to choose their preferred options, select their preferred thinking processes, and design their preferred format for sharing results. When activities are teacher directed, the activities should allow each student to work in a preferred learning style.

- Freedom of choice. This modification is closely linked to variety in that gifted students need freedom to choose topics to study, methods for finding information, the types of products that will be created, and input into criteria to be used for evaluation of the products. Process modifications that facilitate freedom of choice include: learning centers, individual study plans, projects, investigations, computer-mediated learning, and self-directed learning.

  Gifted students are not born with the abilities and skills to profit from free choice. In the initial stages, teachers will provide most of the structure needed; students will have a limited range of choices. As students gain in self-discipline, structure can be gradually removed until almost all decisions about goals and objectives of the inquiry, skills needed prior to initiating the inquiry, steps to be followed, and methods for judging performance are made by students.

  Freedom of choice should also be built into small group investigations. A topic might be teacher initiated, with an option for each small group to choose one aspect of the topic for intensive study. Students will develop a plan for research that includes the responsibilities of each group member with timeline for completion, selection of materials needed and methods to be used in the conduct of the inquiry, and determination of the format for presentation of the results.

- Pacing. The pace of instruction is perhaps the most important process modification for gifted students. It involves how rapidly information is presented in learning situations. When the learning pace is accelerated, students can move through the standard curriculum in a shorter time, with new material introduced quickly. There are several types of acceleration. One type is early entrance, where the child enters school, or junior high, or high school, or college, early because he has the readiness for that grade level. Another type is grade skipping, where the child moves from third to fifth grade to match more closely his level of performance.

Product Modifications

Students' progress toward expertise in a chosen field can be facilitated by gradually increasing the complexity of potential products. The basic principle underlying product modifications for gifted students is that each student, to the extent possible, follows the guidelines that a professional in a field would use.

For example, a younger student might write a description, draw, or create a model of a desert ecosystem. As the student develops a more sophisticated understanding of ecological systems, she may write a detailed analysis of the interdependence of plants and animals in a particular ecosystem, produce a videotape illustrating interactions within the ecosystem, or create a graphic representation.

Similarly, another younger student might write a research paper using two or three secondary sources of information in which he presents a summary of the data he found. Later, the same student might use several primary and secondary sources for data collection, analyze the data in relation to the purpose of the research, synthesize his findings, and prepare a paper using a format similar to that found in professional publications.

Thus, the proposed product is:

- directed toward a real problem or opportunity,
- real, versus having a contrived purpose,
- transformation or synthesis of currently existing information,
- designed to have an impact on a particular audience,
- presented in a format selected by the student and appropriate for the audience
- evaluated with criteria used by experts in the chosen field.

- Real problems or opportunities. Creative activity occurs in response to situations of uncertainty, puzzlement, wonderment, or difficulty. A combination of favorable circumstances also can be a catalyst for finding intriguing problems or challenging opportunities. Problem finding includes analysis of the situation, definition of the problem, and development of a problem statement.

- Real purpose. Creative products are designed to meet significant goals. The construction of knowledge requires articulation of those goals and analysis of possible pathways to the goals. Gifted students must make decisions, plan investigations, conduct investigations using relevant content and methods, determine the format of the product and identify appropriate audiences just as a professional in the field would do.

- Transformation. Products created by gifted students should be more than summaries or compilations of the thoughts and ideas of others. Although creative individuals draw upon the works of others, they conduct their own analyses of collected data, evaluate and interpret the results, then synthesize or transform selected elements into entirely new forms. Transformation may involve viewing information from a new perspective, reinterpretation of data, elaborating or extending ideas, combining information from diverse sources, or reinventing existing models or structures to reflect changes in existing knowledge structures.

- Real audiences. Products of gifted students should be designed for particular audiences -- a governmental agency, an academic community, patrons or practitioners of the arts, publishers, local community groups, or other student groups. The product is a form of communication with a sender, a message, a medium, and receivers. If interaction takes place only between students and teacher, students do not learn the skills of analyzing the characteristics of the intended audience, planning and preparing their messages and selecting an appropriate medium of communication. They also lack opportunities to observe the effects of their message on the intended audience.

- Self-selected format. When gifted students conduct investigations or create new products, they should be able to choose from a variety of media formats in which to display their work. Learning to create many different kinds of products is an important aspect of their intellectual development. While gifted students are learning the processes of creating a particular kind of product, it is appropriate to have all of them use the same format and create similar products. During independent or small group investigations, however, gifted students should have the option of selecting a presentation format that is compatible with their own strengths and interests, and goals.

- Appropriate evaluation. Criteria for evaluation of student products should be listed clearly and the evaluator(s) clearly identified. When students direct a product toward a real audience, they need to know the expectations of the audience as well as the criteria used by professionals in the field. Students benefit from learning how to use criteria and rubrics to evaluate their own work, that of their peers, and that of professionals.

  Formative feedback is an essential element in the learning process. Students should have frequent opportunities to compare their self-evaluations with evaluations made by teachers, peers, or professionals, discuss similarities and differences, and refine the skills needed to self-assess progress toward their goals.

Other Special Services

A few gifted students, who may have needs beyond the scope of the recommended modifications, will need other kinds of special services.

- Gifted students who do not speak English as a first language will require interventions appropriate for gifted students as well as special instruction in English language acquisition.

- Gifted students who have a disabling condition such as a learning disability, will need a curriculum modified to include resources, such as assistive technology, and instructional or counseling interventions to help mitigate the effects of the disabling condition while still receiving challenging work matching their gifted profile.

- Gifted students who have differences due to culture, economics, geography, or family structure, need the richness of their experiences honored and incorporated into the content of the curriculum for all gifted students.

- Exceptionally gifted students often need radical acceleration-- or skipping several grades-- though not

necessarily at one time. Administrative or counseling interventions may be necessary to allow exceptionally gifted students to have individual learning plans or facilitate access to resources not available in the school

Summary

No one gifted program will fit all gifted children. Teachers should be prepared to have available a number of curriculum modification options from which students may choose, depending on the relative strengths and weaknesses of each child. In situations where there are many or several gifted children, teachers will select from the generalized guidelines for content, process and product modifications described above. Children considered to be highly or exceptionally gifted will need correspondingly more modification and will likely need radical acceleration. Teachers can be cognizant that the more highly gifted the child, the more exceptional the child's learning characteristics and thinking abilities will be when compared to other students, thus the more exceptional the child, the greater is the need for radical modification of curriculum, acceleration, or both.

When content disciplines are integrated into a thematic format, students learn complex ideas and relationships quickly and discover connections within and across disciplines. If curriculum plan organization also includes a variety of options in varied intelligences at different levels of difficulty, each gifted student can choose an effective option through which to master relevant standards and use new knowledge to construct preferred products.

Organizational Options for Instructional Services to Gifted Students

The governing board of each local school district may select from a continuum of options designed to provide instruction for gifted students. Although professionals in the gifted field, like other education professionals, have healthy differences on how best to serve gifted students, most agree that the content taught, the processes used, and the kinds of learning that students are expected to do must be different from the usual curriculum of the school.

Several differentiation options, well founded in research, are listed below. The options represent a continuum of services (Kanevsky, 1999) with escalating levels of acceleration and curriculum modification. Modifications for gifted children should match the learning characteristics and needs of the child.

Level One, for **most** students, **does not provide** *an educational program commensurate with the academic abilities and needs of* **gifted** *pupils*.

Level Two, for **many** students, **may provide** for the *academic abilities and potentials* of some **mildly** and **moderately gifted** students.

Level Three, for **some** students, includes options appropriate for **moderately to highly gifted** students.

Level Four for a **few** students, includes options appropriate for **highly and exceptionally gifted** students.

Level One: Options for Most Students	
Option	**Definition**
Enrichment without Acceleration	Students learn and use critical and creative thinking processes, work with content different from that required in the district curriculum, and complete projects in areas of interest. Most modifications are in areas of process and products. **Not acceptable as a district-wide service model for gifted students.**
Academic Competitions	Some, but not all, academic and creative competitions require students to work with more complex content, develop advanced methodological skills, and create sophisticated products. Students also may develop research, leadership, and communication skills. When preparatory learning activities can be linked to academic standards at a higher level than students would be learning in regular classrooms, academic competitions can be among the services provided to gifted students. (See Appendix I for an example) **Competitions cannot be the sole program in a district curriculum for gifted students.**
Advanced Placement Classes	Students may take intensive classes in selected disciplines as high school juniors and seniors. Those who pass the required final tests earn credits that often are accepted at colleges and universities as a part of required curriculum. **Advanced placement classes may be appropriate for many gifted students but cannot be the only program option in a district curriculum for high school gifted students.**

Level Two: Options for Many Students	
Option	**Definition**
Cluster grouping	A small group of gifted students are clustered for instruction into the regular classroom of one teacher who has training in education of gifted students. Appropriate for mildly gifted students at any grade level; may be effective for some moderately gifted students.
Pull-out Classes	Gifted students are grouped with a special teacher who is endorsed in education of the gifted. Students work with accelerated content and advanced skills to do complex projects. An itinerant teacher who serves more than one school may provide services in a resource room or at the students' home schools.
Enrichment plus Acceleration	Gifted students engage in differentiated curricular activities that allow them to work at a higher level. Enrichment classes may be offered at the students' home schools or in resource rooms in which students from multiple schools are served. Support options may include courses sponsored by museums, art galleries, science-centers, humanities centers, and other community or regional associations.
Multi-age and/or cross-grade grouping	Gifted students from two or three grade levels are placed in the same class for appropriately challenging instruction with a teacher who has training in education of gifted students. Appropriate for mildly to moderately gifted students.
Ability grouping Honors sections	Students with advanced abilities are grouped together to receive appropriately challenging instruction. This option allows students to receive advanced instruction from gifted-endorsed teachers in one or more courses designed to match the rapidly developing skills and thinking capabilities of gifted students
Interdisciplinary projects or courses	Students with advanced abilities in varied intelligences are grouped to receive advanced instruction from gifted-endorsed teachers in interdisciplinary projects or courses (where several disciplines are integrated through the use of broad generative themes) designed to promote collaboration and to allow gifted students to work in areas of strength and interest.

Level Three: for Moderately and Highly Gifted Students	
Option	**Definition**
Acceleration by pacing; curriculum compacting	Students move more rapidly through the concepts and skills of the disciplines; for example, they might complete requirements of three grade levels in two years.
Flexible Pacing: Acceleration within a discipline	Students gifted in a specific academic area are placed at a higher level for instruction in that area. Administrative arrangements are needed to facilitate movement between classes.
Ability Grouping Special Classes; Honors Sections Advanced Placement	Students with advanced abilities are grouped together to receive appropriately challenging instruction. In this option, content can be accelerated within a discipline, or students may take complex, interdisciplinary courses designed to match their rapidly developing skills and thinking abilities.
Seminars	Students with a strong interest and/or ability in a particular area are grouped for a specified period of time to engage in specialized learning activities with a mentor or specialist in that area. Students may also prepare and participate in presentations to appropriate audiences.
Acceleration by grade skipping	Gifted students are advanced to a grade level that is more closely matched to their ability levels. Many experts in the field recommend that grade acceleration may be most effective in very early grades or when a student leaves one school to go to another.
Acceleration by skipping multiple grade levels	Gifted students are advanced several grade levels from their age peers. This option may include early entrance to middle school, high school, and college. Administrative arrangements are needed for coordinating arrangements between schools
Magnet Schools	Identified gifted students are enrolled in district or regional schools that provide appropriate curricula for moderately and highly gifted students. A magnet school may be only for gifted students or may have at least one classroom for gifted at each grade level.
Mentorships	A student with particular strengths and interests is matched to an adult, with interest and expertise in the same area, to conduct advanced research or study programs. Mentors can be from the local community or can be linked, through internet, mail, or telecommunications, from anywhere in the world. Mentorships for students should be arranged following school district guidelines with reputable businesses, institutions or agencies, and must be closely monitored.
Independent Study	A student who has learned the skills of self-regulation contracts with a teacher to conduct in-depth investigations in an area of interest.
Individual Student Plan	A student proceeds according to a formal plan in which the learning objectives, resources, and support services needed by the gifted student are prescribed and/or agreed upon in conference with student, teacher, parent, and school administrator.

Level Four: for Highly or Exceptionally Gifted Students	
Option	**Definition**
Early entrance to college	Highly and exceptionally gifted students may choose to leave the home school district to enroll part time or full time in a college or university program in order to gain access to appropriate learning opportunities. Early entrance programs may serve profoundly gifted pre-teen students; more commonly, students are enrolled after the age of 13 after attaining an exceptionally high score on a test administered through a Talent Search Program. Local school personnel can provide support primarily through assisting the student and his or her parents with arrangements needed to enroll in such programs.
Summer or after-school programs at Universities	Students who attain high scores on examinations in talent searches may enroll in highly accelerated courses for three to six weeks during the summer. Local district personnel assist students through sharing information about the programs, accepting successful completion in a program as credit toward graduation requirements or completion of a required class and, in some cases, by providing assistance with test fees and other costs.

Other Alternatives for Some Gifted Students

The following options allow gifted students to pursue advanced work in one or more disciplines even when needed services are not available at the local district level or in the community. These options are particularly appropriate for highly and exceptionally gifted students and for gifted students who live in rural areas.

Option	Definition
Distance Learning via Internet or Educational Television Network	A student uses the Internet, interactive television, audio-enhanced learning, or a combination of technologies to pursue a course of study offered by an accredited institution. The course of study may include a complete curriculum or classes within a specific discipline. In some areas, college-level classes are offered through educational television networks Local education agencies provide support services including internet access and assistance with tuition and resource materials for the on-line or televised classes. (See Appendix J for an discussion of distance learning)
Correspondence Study	A student pursues a course of study using learning materials and activities that are packaged by an agency not closely affiliated with the local school. Local education agencies may provide support services and resource materials.

Counseling and Guidance

Gifted students need parents, teachers, counselors and psychologists trained in their characteristics and behaviors that can be their advocates as they navigate the educational system. At various times in their lives, gifted children will need academic guidance, personal and social guidance, leisure time guidance, career guidance, and college or life planning guidance.

All gifted students need to better understand the academic, personal and social implications of their own intellectual ability. Counselors trained in the characteristics and needs of gifted students should discuss common traits of giftedness individually or in small groups, to help them understand that they learn differently from others. This helps them not only understand themselves, but accept others rather than be impatient.

Test data should be discussed and interpreted with gifted children in an age appropriate manner, particularly since academic options will be offered based on that data. Students have a right to understand what being gifted means, as they will be living with it for their entire lives. They need to understand their own unique learning strengths and weaknesses and learning style preferences. This becomes more important during secondary school years as these strengths begin to have serious implications for academic course selection, college or other post high school training choices, and future career choices. Gifted students of all ages will benefit greatly from informal discussions with parents, teachers and counselors about how their strengths and personal values fit with various career areas. With career fields changing so rapidly, gifted students may enjoy the challenge of inventing their own hoped for future career.

Gifted students will benefit from discussions of some of the common traits of giftedness, and in seeing how these traits may affect themselves and others. Gifted students need to understand both the benefits and the possible problems that result from being gifted. For example, some gifted individuals are at risk of underachievement due to perfectionism, idealism, a judgmental attitude, or extreme sensitivity. They need to learn what helps them stay challenged; make decisions to prioritize their time and learning, and realize that mistakes can be powerful learning incentives rather than personal failures.

In the social and emotional domain, gifted students may need help learning to work effectively with others, to cope with negativity from some age peers and adults, and to develop strategies for social interaction. A differentiated curriculum will include activities for developing leadership, communication skills, group dynamics, decision making, planning, cause and effect reasoning, and problem solving skills. Teachers who have had advanced courses in counseling and/or psychology of giftedness, may provide some counseling and guidance services to students when the teacher and students have a relationship of mutual trust and the students' problems are not serious.

Gifted students have a particular need for support as they, and their parents, strive to find appropriate educational interventions to support their exceptional abilities. At times, they may need individual or small group counseling with a trained counselor or psychologist. School district personnel are encouraged to assist these students in finding appropriate counseling and guidance services to meet their needs.

Summary

Modifications in learning environment, content, processes, and products for gifted students are closely related, interactive, and grounded in the unique learning needs of students at the upper extreme of a normal distribution. Most of these modifications are appropriate for most gifted students. None of the curriculum differentiation procedures is effective in isolation.

Generally, several modifications are integrated into a learning activity. For example, the content modification of organization to enhance learning facilitates rapid pacing. When content disciplines are integrated into a thematic format, students can learn complex ideas and relationships quickly and discover connections within and across disciplines. If the thematic organization also includes many options from which to choose and allows students to work in varied intelligences at different levels of difficulty, each student can choose engaging options through which to master relevant standards and use new knowledge to construct preferred products.

Highly gifted students need correspondingly more differentiation and special services, depending on the degree of their giftedness. Evening or weekend classes, community college classes, distance learning, correspondence courses or other options may be utilized. Highly gifted students will benefit from work with adult mentors. All gifted students will benefit from learning about their own giftedness and its social, emotional, and intellectual demands. Counseling and advocacy from adults who understand both the academic and social and emotional needs of gifted students are critical elements in developing this understanding and acceptance of self.

5. *Funding for Gifted Programs*

What the state law says:

"If the governing board fails to submit the scope and sequence for gifted pupils as prescribed in subsection B of this section or if the scope and sequence submitted by the governing board fails to receive full approval by the superintendent of public instruction, the school district is not eligible to receive state aid for the group A weight for three per cent of the student count and shall compute the weighted student count for pupils in group A as provided in § 15-943 by adjustment of the student count accordingly.

By December 1 of each year, the department of education shall notify those school districts which appear to be in noncompliance and note the specific areas of deficiencies which must be corrected by April 1 of the following year to be eligible to use the actual student count rather than an adjusted student count. By April 15, the department shall notify those districts which must use an adjusted student count for the next fiscal year's state aid as provided in chapter 9 of this title." (A.R.S. § 15-770.C.)[italics added]

"A. School districts which comply with § 15-770 and which submit evidence that all district teachers who have primary responsibility for teaching gifted pupils have obtained or are working toward obtaining the appropriate certification endorsement as required by the state board may apply to the department of education for additional funding for gifted programs equal to fifty five dollars per pupil for three per cent of the district's student count, or one thousand dollars, whichever is more. As an alternate to the individual district application process, a governing board may request that a county school superintendent apply on its behalf as part of an educational consortia. The consortia may include school districts in more than one county. If additional monies are available after funding all eligible school districts or educational consortia, the additional monies shall be used to increase the per pupil amount for each district or educational consortia funded. If sufficient monies are not available to meet all requests, the state board shall determine the allocation of monies based on the comprehensiveness across grade levels, appropriateness to the population being served, utility and demonstrated effectiveness of the scope and sequence and the likelihood of the school district's or educational consortia's proposed program successfully meeting the needs of the gifted pupils. A school district shall include the monies it receives for gifted programs and services under this section in the special projects section of the budget.

B. School districts which receive additional assistance as provided in this section shall conduct evaluation studies of their programs for the gifted and submit information to the department of education regarding the results of their studies. The department shall develop evaluation guidelines, reporting forms, procedures, and time lines." (A.R.S. § 15-772.A.B.)[italics added]

Questions frequently asked about funding:

1. If a governing board fails to submit a scope and sequence for gifted pupils, what happens?

The school district is not eligible to receive state aid for the Group A weight for three percent of the student count.

2. If the scope and sequence is not approved by the Superintendent of Public Instruction, what happens?

The school district is not eligible to receive state aid for the group A weight for three percent of the student count.

3. If a scope and sequence is not received or approved, what is the responsibility of the Department of Education?

By December 1 of each year, the Department of Education shall notify those school districts that appear to be in noncompliance noting the specific areas of deficiencies which must be corrected by April 1 of the following year to be eligible to use the actual student count rather than an adjusted student count. By April 15, the department shall notify those districts that must use an adjusted student count for the next fiscal year's state aid.

4. What are the requirements for receiving additional …state assistance for gifted program services?

- An Approved scope and sequence with revisions submitted to the department by July 1 of each year;
- Evidence that all district teachers who have primary responsibility for teaching gifted pupils have obtained or are working toward obtaining the appropriate certification endorsement;
- Results of the evaluation studies of their program services submitted to the
- Department of Education gifted office.

5. How much supplemental money is available?

Beyond the district allocation for mandated gifted serviced, funding for gifted program services is equal to $1,000 or up to $55 dollars per pupil for three percent of the district's student count, whichever is more.

6. In order to apply for gifted education funding, what alternatives may individual districts utilize?

As an alternate to the individual district application process, a governing board may request that a County School Superintendent apply on its behalf as part of an educational consortium. A consortium may include school districts from more than one county.

7. How do districts apply for gifted education funding?

- Refer to Appendix G for a sample application form.
- In general, schools provide on line assurance about the gifted mandate. An on line budget page and a program description of proposed gifted activities are also required. Demographic forms are submitted annually with this computer-based application. The gifted application is submitted on the Arizona Department of Education Grants Management Home Page. For very specific detail on how to file on application, please see the Grants Management Manual. The Manual is available as a down load from the Arizona Department of Education Home Page. It is available free of charge, at the Arizona Department of Education Grants Workshop or at a Regional Training Center (RTC) Workshop. Lastly, it is available free of charge upon request of the Grants Office. Arizona Department of Education, tel. (602) 542-3452.
- As noted above, a scope and sequence for gifted curriculum is required to be approved and on file at the Arizona Department of Education.
  (Please see items 1-3, above.)

8. Are charter schools eligible to receive gifted funds?

- Personnel in charter schools are not required to comply with the gifted mandate, nor are they required to apply for funds.
- If charter school personnel apply for gifted funds they are required to comply with all requirements in statute for gifted education, in the same way that personnel from traditional public schools follow the gifted mandate requirements.
- Charter schools may form an educational consortium, as an alternate to an individual charter application.

9. How do districts amend their new project?

- On line submission of an amendment through the Arizona Department of Education Grants Management Home Page.
- The application requires that the applicant be registered with the Arizona Department of Education. Registration is made through the Grants Management Unit of the Arizona Department of Education.
- Capital outlay must be itemized in all projects.
- If there is a change in the focus of the original application, additional narrative must be completed.

1. The deadline to file amendments is March 30 of the current fiscal year (USFR code).

10. How do districts, charter schools, and consortia amend their projects for carryover funds?

- Districts, charter schools, and consortia that do not spend all of their project funds must do an amendment to their project to add the unexpended funds as carryover.

Procedures for Reporting Carryover Funds

1. When a completion report is submitted to ADE indicating a cash balance, and or interest earned, an amendment to the current year's project must be submitted indicating carryover funds along with any interest earned. This amendment must follow outlined procedures.
2. Funds made available through a reallocation process also can be amended.
3. Amendments to include carryover fund in a subsequent year's project cannot be processed until the Arizona Department of Education receives and approves the completion report.
4. All interest earned from the prior year's projects may be carried over into the present year's project by amendment. There is no cap or limit on the amount of interest earned from gifted funds that can become carryover interest.
5. New capital outlay must be itemized.

11. If additional monies are available after funding all eligible school districts, charter, or consortia, what happens?

If additional monies are available after funding all eligible school districts, charters, or educational consortia, the additional monies shall be used to increase the per pupil amount for each district, charter, or educational consortia funded. Districts, charters, and consortia are notified of the amount of additional funds. They must then follow the amendment procedures.

12. How do districts amend their projects for the reallocated funds?

To amend a project for reallocated funds, a district, charter, or consortia will need to follow amendment procedures indicated in item 10, above.

13. How do districts prepare the completion report?

- Submit an on line completion report through the Arizona Department of Education Grants Management Homepage.
- Itemize capital outlay that was purchased after initial project approval.
- The deadline for filing completion reports is 90 days after the project closing date.

14. If sufficient monies are not available, what happens?

If sufficient monies are not available to meet all requests, the State Board shall determine the allocation of monies based on the comprehensiveness across grade levels, appropriateness to the population being served, utility and demonstrated effectiveness of the scope and sequence, and the likelihood of the school district's, charter's, or educational consortia's proposed program successfully meeting the needs of the gifted pupils.

15. If I have questions how shall I proceed?

The local school business office is a good resource.

6. *Evaluation and Assessment of Gifted Programs*

Evaluation is most often defined as the determination of merit or worth of some entity such as an educational program. Program evaluation is the act of answering focused questions about how the program started (background), how it works on a daily basis (operation), and what effects it has had on those involved (outcomes). These questions should be developed by examining issues such as 1) student identification, a program background area; 2) classroom instruction, a program operation area, and 3) student knowledge, a program outcome area. However, unintended program effects should be studied or at least allowed to surface, including pressure placed on students and the development of elitism.

Evaluation questions are usually investigated using interviews, questionnaires, and the observations of real-time events or tapes of those events. Documents such as program descriptions, funding proposals, and curriculum guides or lesson plans might be examined as well. Testing, as an exclusive means of evaluation, is not recommended unless the items are constructed based on the content taught in the program. How gifted students perform on standardized tests is only one of many indicators of program quality, especially since most students are in a gifted program due to high scores on such tests and assessment using an instrument from the Arizona State Board of Education approved test list for gifted identification.

Exactly which evaluation areas and specific questions to ask should be based in large part on the needs, values, and perceptions of program stakeholders including parents of program students along with students and teachers in the program. Other audiences to consider in planning the evaluation would be administrators, school board members, and state and federal agencies. Further, the evaluation plans and questions should be designed around the explicit program purposes and practical operations. The evaluation recommendations that follow are grounded in 1) background, 2) operation, and 3) outcome areas, along with several possible associated evaluation questions. Please note that these are only examples and that many other areas and specific evaluation questions can be developed based on stakeholders, audiences, and program *purposes.*

Sample Questions for Background Areas

1. Teacher selection, preparation, and orientation: What specific training do program teachers have? What additional training might program teachers need?

2. Student screening and selection: Is the proportion of minority students in the school equal to the proportion identified for the program? If not, what must be done to align these figures?

3. Curriculum selection and/or development: To what extent does the proposed curriculum reflect important criteria that should be found in gifted programs such as abstract content and higher level thinking?

4. Provision for resources to support the program as planned: To what extent has the school or school district funded the program with regard to materials, computer hardware and software, instructional space, instructional and support personnel, and incidental expenses including teacher training and travel?

5. Scheduling and resource planning: Were the specific schedules and needed startup resources in place when the program was initiated? If not, what has the district done to correct the problem?

6. Description of program along with an explanation of the program orientation for parents, non-program teachers, and school administrators: What procedures are in place to ensure that program parents understand the purposes, operations, and expected outcomes of the gifted program?

Sample Questions for Operation Areas

1. Classroom provision for higher-level thinking: In what ways are higher level thought processes emphasized in teacher questions a) in lessons and b) in homework?

2. Opportunity for student divergent thought and action: In what ways are students able to practice effective creative problem solving methods in finding and solving problems during classroom lessons?

3. Student involvement in instructional experiences: To what extent are students involved verbally and physically during most classroom experiences?

4. Encouragement of student independence in thought and action: To what extent do teachers attempt to transfer responsibility for learning decisions to students inside and outside of the classroom?

5. Provision for making instructional materials relevant to gifted subgroups: To what extent do the materials in the class contain content that minority, disadvantaged, disabled, highly gifted, and female students can associate with own backgrounds?

6. Opportunity for students to learn important concepts and generalizations: To what extent are the students asked to pull together ideas and construct abstract principles that can be applied to other settings or situations?

Sample Questions for Outcome Areas

1. Evidence of continued institutional program support: To what extent are the principal and other school leaders committed to the program?

2. Evidence of inter-grade level articulation: What is the relationship between program content and expected student outcomes from grade to grade?

3. Evidence of student learning as a result of the program: What specific content have the students learned as a direct result of the program?

4. Evidence of student problem solving abilities: To what extent can program students use problem solving techniques effectively in new settings?

5. Evidence of pressure placed on gifted students: To what extent is dropout rate or student burnout a function of program pressure on gifted students?

6. Evidence of connection between program and career awareness: To what extent do program students have a clearer vision about their future schooling and vocational goals?

Making Evaluation Questions Specific

While the above areas and associated questions may assist in planning program evaluations in gifted education, most plans should contain much more specific questions. In addition, methods to be used and the sources from which data are to be collected should be stated. What follows is an example of how such planning would occur for just one operation area--**classroom provision for higher-level thinking**.

Specific Evaluation Questions	Methods & Sources
According to Bloom's Taxonomy, how many higher- and lower-level questions are asked by teachers during classroom discussions?	Classroom observation Student questionnaire
What kinds of thinking are students asked to demonstrate on tests and quizzes?	Inspection of tests
What kinds of thinking are students asked to use on projects and homework assignments?	Student questionnaire Inspection of completed assignments
In what ways are students able to apply higher-level thinking to classroom problem-solving activities	Observe students in class Student interviews Test students

This example represents just one overall area of investigation. In effective and comprehensive program evaluations, the investigator would study at least one or two program background areas, at least two or three operation areas, and at least two or three outcomes. These might come from the examples given here, but may also be consistent with stakeholder and audience needs as well as local program process and content. The following suggestions may assist local evaluators as they design their gifted program efforts.

<u>Suggestions for Conducting Evaluations</u>

- Always try to collect data from more than one source (e.g., students and parents) and use more than one kind of measure (e.g., interviews and questionnaires, etc.). This allows the evaluator to cross check information to see if there is agreement and to pick up information from one source or measure that the other did not catch.

- Share early findings with participants (member checking) to determine if these results fit with their understanding about how things work. This is a good way to determine accuracy and involves stakeholders in the evaluation.

- Attempt to use at least two evaluators who should look at all results independently to see if they arrive at the same conclusions. This triangulation reduces bias that any in-house evaluator would have from being too close and perhaps too vested in the program.
- If there are sufficient funds, use university experts in evaluation to assist in planning and possibly collecting data and/or examining selection and curriculum materials. These individuals can provide expertise and experience as well as an outside view of things.

- Take a course in program evaluation to improve planning and to provide better information for program improvement.

- Be objective in doing evaluations and reporting the results. It is not credible to simply paint pretty pictures. It is much more believable to show what is working and what needs changing along with your plans for making improvements where needed.

- Make reports succinct and readily accessible so that a reader's attention span is not tested. Begin with a short executive summary (maybe two to three pages) so that if readers look at nothing else, they will at least know what you feel they have to know. Be sure to include more detailed findings so more serious readers can see what you found and how you found it.

Evaluation Submitted to the Arizona Department of Education Gifted Office

The above noted evaluation procedures can be used effectively in the gifted program to augment two forms of evaluation that are presently being piloted by a statewide Work Group on Gifted Evaluation. Volunteers from schools around the state have met during the FY 2000. As a result, a Likert-type evaluation scale has been developed, based on National Association of Gifted Children Standards to help schools evaluate their gifted programs.

This evaluation scale can be used to determine growth in the local gifted program. It is currently being piloted in the Work Group schools. It will be ready for statewide release in FY 2003. This evaluation scale will eventually be a required component of the evaluation submitted to the Gifted Office. (A.R.S. 15-772B.)

Another required evaluation component (A.R.S. 15-772B.) that is being piloted by the Gifted Work Group on Evaluation is a method of analyzing Stanford 9 trend data in light of gifted eligibility data.

Using the Student Accountability Information System (SAIS) and Stanford 9 Verbal and Quantitative Scores, trend data will be collected for gifted students. More information on this process will be released from the office of the Arizona Department of Education, Coordinator of Gifted Students, after the pilot procedures are complete. In the meantime, school personnel are asked to keep local year-end evaluation data in the school files for monitoring. This data will be required in submissions to the Gifted Office at the Arizona Department of Education in FY 2003.

7. *Parenting Gifted Students*

From a parent's point of view

As parents of gifted children, we are faced, daily with a special parenting challenge. We have children who have special needs and talents; yet our children also have similar needs and exhibit some of the same behaviors, as do most other children. We have to think before we speak about our children so as not to offend; at the same time we have to speak out to ensure our children's special achievements are recognized and their special learning needs are met.

In talking with adult friends, for example, we might think: "Will I offend Amy if I tell her what Katie is doing now?" "Will my friend think that I am bragging if I talk about Zach's latest accomplishments?" Or, in talking with teachers, we might say: "She is enjoying the second grade dinosaur unit; however, at home she reads fourth to sixth grade level science books we get at the library. Do you think she could use books with those reading levels for her work with you in class?"

As the parent of a gifted girl, I am writing this chapter with the hope that questions about local resources will be answered and general information will be provided in an empathetic manner. I also hope that it will become very evident that many parents in a similar situation also are looking for direction in making decisions regarding the education of their gifted children.

Giftedness

The Arizona legal definition of giftedness is as follows:

> *gifted child means a child of lawful school age who, due to a superior intellect or advanced learning ability, or both is not afforded an opportunity for otherwise attainable progress and development in regular classroom instruction and who needs special instruction or special ancillary services, or both, to achieve at levels commensurate with his intellect and ability*. (A.R.S. 15-761.7.)

Additionally, Arizona definitions for exceptional children includes:

> *a gifted child or a child with a disability*. (A.R.S. 15-761.6.)

As recently as 1992 some new and more informal definitions have surfaced. Silverman (1992) says:

> *Giftedness is asynchronous development in which advanced cognitive abilities and heightened intensity combine to create inner experiences and awareness that are qualitatively different from the norm. This asynchrony increases with higher intellectual capacity. The uniqueness of the gift renders them particularly vulnerable and requires modifications in parenting, teaching, and counseling in order for them to develop normally.*

In an effort to make that definition as clear as possible, Silverman goes on to say that asynchrony means being our of sync, both internally and externally. Asynchronous development means that

gifted children develop cognitively at a much faster rate than they develop physically and emotionally, posing some interesting problems. For example, ideas forged by 8-year-old minds may be difficult to produce with 5-year-old hands. Further, advanced cognition often makes gifted children aware of information that they are not yet emotionally ready to handle. They tend to experience all of life with greater intensity, rendering them emotionally complex. These children may not necessarily fit expected developmental norms for their age. They may have more advanced play interests and often are academically far ahead of their age peers. The brighter the child, the greater the asynchrony and potential vulnerability. Therefore, parents who are aware of these inherent developmental differences of their children need to prepare themselves to act as their advocates.

Individual Differences Within Giftedness

Attention Deficit Hyper-Activity Disorder (ADHD) and Giftedness

Guenther (1995) tells us: ADHD is something that almost everyone involved with children will encounter. While most researchers agree that ADHD affects only around 3% of the population, it has been listed as the most common reason for referral of children for psychological evaluation.

Parents and teachers of gifted children should be especially concerned about ADHD. A recent study (Cramond, 1995) by the National Research Center on the Gifted and Talented (NRC/GT) suggests that many of the symptoms of ADHD -- inattention, hyperactivity, impulsivity, sensitivity, difficult temperament, poor handwriting, deficient social skills, and academic underachievement -- may also be indicators of gifted or creative potential. All children with ADHD are not, of course, highly creative or gifted, nor do all gifted, creative children exhibit signs of hyperactivity. Research suggests some overlapping of the two.

Dr. James Webb (1993) talks about what parents and teachers should do. Determining whether a child has ADHD can be particularly difficult when that child is also gifted. The use of many instruments, including intelligence tests administered by qualified professionals, achievement and personality tests, and parent and teacher rating scales can help the professional determine the subtle differences between ADHD and giftedness. Individual evaluation allows the professional to establish maximum rapport with the child to get the best effort on the tests. Since the test situation is essentially constant, it is possible to make better comparisons among children. Portions of the intellectual and achievement tests will reveal attention problems or learning disabilities, whereas personality tests are designed to show whether emotional problems could be causing the problem behaviors. Evaluation should be followed by appropriate curricular and instructional modifications that account for advanced knowledge, diverse learning styles, and various types of intelligence.

As with any medical diagnosis, it is important that parents also seek the advice of their pediatrician along with the advice of other professionals in the field. It is often necessary to have several opinions (not just a first and second) before parents and clinicians can develop a diagnosis and treatment plan. Careful consideration and appropriate professional evaluation are necessary before concluding that bright, creative, intense youngsters have ADHD. Consider the characteristics of the gifted/talented child and the child's situation. "Do not hesitate to raise the possibility of giftedness with any professional who is evaluating the child for ADHD" (Webb, 1993). "Relatively few healthcare professionals have received formal training about the characteristics of giftedness (Webb, 2000). It is

important to make the correct diagnosis, and parents and teachers may need to provide information to others since giftedness is often neglected in professional development."

Highly Gifted

Highly gifted children tend to be those who demonstrate asynchronous development and they seldom are equally advanced in all areas. Due to their high cognitive abilities and high intensities, they experience and relate to the world in unique ways. These children often are found as a result of extremely high scores on an individually scored IQ test, generally above the 140 IQ range, and working at three, four or more grade levels ahead of their peers. Others may be prodigies in areas such as math, science, language and/or the arts. Profoundly gifted children can score in excess of 170 IQ.

Highly gifted children demonstrate characteristics such as the extreme need to learn at a much faster pace, process material to a much greater depth, and show incredible intensity in energy, imagination, intellectual prowess, sensitivity, and emotion, which are not typical in the general population. The child with a 160+ IQ is as different from the child with a130 IQ as the latter is from the child who demonstrates average ability. Current research suggests that there may be a higher incidence of children in this high range than previously thought. Due to their unique characteristics, and their uniqueness, these children are particularly vulnerable. Highly gifted children need special advocacy because very little has been done to develop appropriate curriculum and nontraditional options for these children.

Gender Differences

Gifted girls often are not the quiet, pleasant, and sociable children our culture often associates with the ideal girl. Many of them are highly verbal to the point of interrupting others, asking pointed questions, and being seen as a nuisance. At the same time, these young girls need a lot of time alone -- usually spent reading or simply thinking. They would rather do things themselves than interact with others, particularly if the others have difficulty keeping pace with their intellect. Dr. Barbara Kerr in her book, *Smart Girls*, has noted that many gifted girls are characterized by behaviors that are prickly; others may withdraw into a shell as a means of protection.

Gifted boys likewise often differ from the expectations of mainstream society. The intensity and sensitivity of gifted boys often prompts them to worry more than other boys about the feelings of others and issues of fairness. They are more likely to get their feelings hurt by criticism or rejection, and may cry more easily or more frequently about injustice or sad situations. Their breadth of interests is typically so great that some of them may appear scattered and unfocused. Some parents and teachers may even see them as unmasculine because of their sensitivity and the difficulty some gifted boys experience in taking charge of a task and forcefully seeing it through to completion (Webb, 2000).

Dual Diagnosis and Special Needs

It is important for parents and processionals to keep an open mind with reference to giftedness and individual differences of gifted children. Three areas of giftedness are commonly tested; verbal reasoning, non-verbal reasoning, and quantitative reasoning. Because a child qualifies for gifted services in one of these areas does not mean that the same child might not have additional needs in

other areas. It is imperative that we remember that a gifted child may have secondary challenges that can mask the gift(s).

Some of the most commonly served categories of challenges or disabilities include visual impairment, hearing impairment, specific language disability, speech/language impairment, emotional disability, orthopedic impairment, or other health impairment. It is not uncommon to have a student with a health impairment who tests, for example, in the 98th percentile in quantitative reasoning.

Professionals serving a child with a disability should also be able to help make appropriate placement decisions to keep the child sufficiently stimulated to bring out the strengths of his or her talents. You, as a parent or advocate, are encouraged to work with the directors of gifted services and special education in your local school district to accomplish this goal.

Parents' Rights

Information in this subsection is taken from the gifted law in Arizona.

What information should my Local Education Agency provide me?

Your local education agency is the traditional public school or charter school, (if the charter school has elected to participate in gifted programming)

- *Definition of a gifted child.*
- *Services mandated for gifted students by the state of Arizona.*
- *Services available from the Local Education Agency.*
- *Written Criteria of the Local Education Agency for referral, screening, selection, and placement*.(A.R.S. R7-2-406.3.a.)

Which students will be placed in gifted programs?

- *Students shall be served who score at or above the 97th percentile on national norms in any on of three areas - verbal, nonverbal, or quantitative reasoning - on any test from the State Board-approved list.*
- *Students who score below the 97th percentile **may** also be served based on the policies established by your local school district.* (A.R.S. R7-2-406.1.a.)

When will my child be tested?

- *Each Local Education Agency shall make testing available for students K-12 on a periodic basis but not less than three times per year;*
- *inform parents or legal guardians of the results of the district administered test within 30 school days of determining the test results;*
- *upon request, explain the results to parents or legal guardians*. (A.R.S. R7-2-406.3.c.)

At what age may students be tested?

- *All schools shall admit children between the ages of six and twenty-one years; if a kindergarten program is maintained, a child is eligible for admission to kindergarten if the child is five years of age.*
- *A child is deemed five years of age if the child reaches the age of five before September 1 of the current school year.* (A.R.S. 15-821.A.C.)

Based on this information, Local Education Agencies may test at as early an age as their policy dictates.

Who can refer students for testing?

- *Referrals are included in the screening process.*
- *Referrals for testing may be made by anyone who knows the student, including but not limited to, parents, teachers, administrators, counselors, peers, or by the student themselves.*

What is meant by screening, identification, and placement?

Screening is the process of nominating the potentially gifted students who may be included in the identification process.

Identification is the process of verifying those students who have superior intellect or advanced learning ability and are eligible for special services through a gifted education program. The process must include, but is not limited to, testing verbal, nonverbal, and quantitative reasoning abilities to determine at least those students who score at or above the 97th percentile on a test from the list approved by the State Board of Education. Districts may also use other criteria in their identification process.

Placement in a program involves providing services that will provide the necessary stimulation to meet the academic abilities and potentials of all students who fit state and district criteria

Questions Parents Can Ask Their Local Education Agency

The following list of questions, compiled by Amy Kargman, can also be found on the Internet. Go to http://www.ericec.org, then click on Gifted Education. In many cases you can find additional resources, such as monographs, books, ERIC articles, and contact persons, etc. (This list is an adaptation from the list found in text.)

- How do I find out if my child is gifted?
- What kind of testing should be done?
- How can I help my child at home?
- What resources are available to my child and me?
- What will the school do for my child?
- How does a child get into this program?
- What type of program is it?
- What if there is no program for my child?
- What can the classroom teacher do?

- How can I work with the school and/or district?
- How can I support the program?
- How can I promote services for the gifted?
- How can I network with parents and educators?
- How can I learn more about the education of the gifted?
- How can I meet parents with similar needs and interests?
- How do I get the school to provide my child the education s/he deserves?
- What are my rights as a parent of a gifted youngster?
- Are there other sources of gifted programs in my community?
- I need a challenging program for my preschooler. Do you have recommendations?
- My child is reading x number of grades above his class. What should I do?
- Are there specialized schools that deal with my child's ability/problem?
- What weekend, vacation, or summer programs are available in my area?

Ten Suggestions for Parents of Gifted Children

Dr. James Webb, clinical psychologist and senior author of *Guiding the Gifted Child*, offers a list of ten suggestions for parents of gifted:

- **Treat them as children. They are still children**. They need what all other children need: love but controls; attention but discipline; your involvement, yet training in self-reliance and responsibility. Even though they are gifted, they have a thorough understanding of adult problems such as death, sickness, job loss etc. They may need reassurance in these areas.

- **Maintain a consistent system of values and a happy, healthy home**. Maintaining harmony in the family is important for their optimum development. As gifted children may have a greater sensitivity to the world around them, they may be more affected by family disruption. If there is a breakup within the family, be honest with the child in a kind and gentle manner.

- **Give them a special gift: Time**. Children need an understanding parent and/or role model, and they need to spend time with this person. The child needs your attention in order to discuss values and ideas. These children often love the unconventional. You need to spend time helping them to understand the importance of behaving in a socially acceptable way.

- **Don't stifle the gifted child**. Gifted children are known for their curiosity and parents should be especially careful not to stifle the gifted child who asks questions. In particular, the child should not be discouraged for asking questions about what seems to be an improper or forbidden subject. The parent may, however, insist that questions not be asked at inappropriate times, and it may be necessary to ask the child to clarify or rephrase a question. Questions don't need to be answered completely, but parents or significant adults should provide a clue, guidance or even a question, which sends the child into some productive direction. When the parents cannot answer the questions, they should direct the child to a resource, which is likely to have the information..

- **Intellectually stimulate the gifted**. Pushing and intellectual stimulation are different. Some parents seem to feel pressured in many activities, such as reading, problems solving, etc. to push for greater achievement. Rather, you should seek in every way to stimulate and broaden the child's mind and enhance research skills through exposure to books,

encyclopedias, collections, charts, travel, technology, the arts, and active experiences. It is important to take your child to libraries and resource centers. Let them browse and read, let them use the computer to explore. Often children who never get out of their home environment need to see what the city core is like. Expose them to museums and art galleries, educational institutions and historical places to enhance their background learning and feed their curiosity.

- **Encourage friendships and discover hobbies**. Children need friends who are like themselves, to play games with and to share ideas. Encourage friendships, talk to their friends and show your child the value of a real friendship. Parents should encourage their children's hobbies and help them share their interests with their peers and friends.

- **Avoid discouraging unusual questions or attitudes**. Parents should avoid direct, indirect or unspoken attitudes that fantasy, originality, unusual questions, imaginary playmates, or out-of-the-ordinary mental processes are bad, or different. Gifted children's imaginations shouldn't be discouraged. Instead of laughing at your child, laugh with your child and seek to develop a sense of humor and b*alanced outlook.*

- **Don't over-schedule your child's life**. Many parents feel that all of the child's spare time must be filled up with extra lessons of all kinds. They are afraid that the child may become bored for a short time. Allow your child to become bored and let them find a way to use time unscheduled by adults. Sometimes parents are concerned if gifted children spend their time watching TV or reading comic books. While they should not spend all their time doing so, children cannot be expected to perform at the challenge level at all times. Remember, TV and comic books have their own place in a child's growth and development and help a child develop connections with their less gifted peers and understand popular culture. Use common sense!

- **Respect the children and their knowledge**. Sometimes, it may be better than your own. If you feel that a child has made a mistake, start with the assumption that the child did not intend to do wrong. If your child wishes to follow his or her own methods for problem solving, interfere only if the child is in jeopardy of physical or emotional harm. When you have a task you want your child to do, give general instructions to be carried out in the child's way, rather than specific commands that do not take into consideration your child's personality.

- **Get involved in school efforts and community programs to plan for gifted children**. Support the schools efforts to plan programs and activities for these children. Help to interest the Parent/Teacher Association; solicit their help. Support study groups. Be active in the community and advocate for special education programs. Work to construct greater community understanding and appreciation of the special education needs of gifted children and collaborate with all parents in an effort to improve schools for all children.

8. State and National Resources

Legal Small Print: In this chapter, organizations, individuals, addresses, magazines, books, Internet sites, and other resources are listed for your information. Some of the resources contain information created, published, maintained, or otherwise posted by institutions or organizations independent of Arizona Department of Education. Arizona Department of Education does not guarantee the accuracy, completeness, efficacy, timeliness, or correct sequencing of information in these resources. Use of any information obtained is voluntary, and each user should do an independent review of its accuracy, completeness, efficacy, and timeliness. Reference to any specific commercial product, process, or service by trade name, manufacturer, or otherwise, does not constitute or imply endorsement, recommendation, or preference by the Arizona Department of Education.

State and Federal Agencies and National Research Centers for education of gifted children

Arizona Department of Education

Carolyn Carr, Ed.S..
Coordinator of Gifted Education
1535 West Jefferson
Phoenix, AZ 85282
Phone: 602-364-4022
http://www.ade.state.az.us/ess/gifted.htm
e-mail ccarr@mail1.ade.state.az.us

Javits Gifted and Talented Students Education Program
U. S. Department of Education
Office of Educ. Res. and Improvement
555 New Jersey Avenue, NW
Washington, DC 20208-5645
(202) 219-2096
http://www.ed.gov/prog_info/Javits/contact.html

National Research Center on the Gifted and Talented
The University of Connecticut
362 Fairfield Road, U-7
Storrs, CT
(860) 486-4826
http://www.gifted.uconn.edu/nrcgt.html

Arizona University Professors Who Direct Graduate Work in Education of Gifted Students

Dr. Sanford Cohn, Associate Professor
Curriculum and Instruction
Psychology in Education
Arizona State University
Tempe, AZ 85287-2011
(480) 965-3384
http://www.ed.asu.edu/coe/faculty/cohn/htm

Dr. Patricia A. Hays, Associate Professor
Instructional Leadership
Specialist in Gifted and Secondary education
Northern Arizona University
Flagstaff, AZ 86011-5774
1-520-523-3952
Email: pat.hays@nau.edu

Dr. Barbara Kerr, Professor
Counselor Education,
Psychology in Education
Arizona State University
Tempe, AZ 85287-2011
(480) 965-3384
http://www.ed.asu.edu/coe/faculty/kerr.htm

Dr. Stephen D. Lapan, Professor
Center for Excellence in Education
Northern Arizona University
Flagstaff, AZ 86011-5774
(520) 523-7139
http://www.nau.edu/cee/facstaff/faculty/s.lapan/s.lapan.html

Dr. C. June Maker, Professor
Spec. Educ., Rehab., and School Psych.
The University of Arizona
Tucson, AZ 85721-0069
(520) 621-0932
http://w3.arizona.edu/~discover/

/

Arizona Agencies and Organizations that Provide Educational Services for Schools

Arizona Humanities Council
The Ellis-Shackelford House
1242 N. Central Avenue
Phoenix, AZ 85004-1887
1-602-257-0335
http://www.azhumanities.org/

Arizona Alliance for Arts Education
P.O. Box 44065
Phoenix, AZ 85064
1-602-874-4640
e-mail: carolyn@sccarts.org

Arizona Commission on the Arts
417 W. Roosevelt Street
Phoenix, AZ 85003
1-602-255-5882
http://arizonaarts.org/

Arizona State Library, Archives, and Public Records
State Capitol, Suite 200
1700 West Washington Street
Phoenix, AZ 85007
1-602-542-4035
1-800-255-5841(AZ Only)
http://www.dlapr.lib.az.us/

Arizona Historical Society
949 East Second Street
Tucson, AZ 85719
1-520-628-5774
http://w3.arizona.edu/~azhist
Central Arizona Division
1300 North College Avenue
Tempe, Arizona 85281
1-480- 929-0292
http://www.tempe.gov/ahs/
Northern Arizona Division
Fort Valley Road next to Sechrist School
Flagstaff, AZ
http://w3.arizona.edu/~azhist/nadgeneral
Rio Colorado Division
Madison Avenue
Yuma, AZ
http://w3.arizona.edu/~azhist/rio.htm

Northern Arizona University Cline Library
Special Collections and Archives Department
P.O. Box 6022
Flagstaff, AZ 86001-6022
(520) 523-5551
http://www.nau.edu/~cline/speccoll/kids/kids1.html

Arizona-Sonora Desert Museum
2021 North Kinney Road
Tucson, AZ 85743-8918
1-520-883-1380
http://www.desertmuseum.org/education.html

Lowell Observatory
1400 Mars Hill Road
Flagstaff, Arizona 86001
http://www.lowell.edu/education/

National Optical Astronomy Observatories
950 North Cherry Avenue, P. O. Box 26732, Tucson, Arizona 85726,
1-520-318-8000
http://www.noao.edu/

Debbie Shayo, **Arizona Bar Foundation**
111 West Monroe, Suite 1800
Phoenix, AZ 85003
1-602-340-7362

Arizona State Bar Association
111 West Monroe, Suite 1800
Phoenix, AZ 85003-1742
1-602-252-4804
http://www.lawforkids.org/

Challenger Learning Center of Arizona
P.O. Box 39
Peoria, Arizona 85380
1-602-486-6040
http://www.azchallenger.org/

Challenger Learning Center of the Southwest
6000 East Valencia Road
Tucson, AZ 85706
1-520-618-4835
http://www.challenger.org/clc/centers/Arizona/AZ_Tucson.html

Organizations for Educators and Others Interested in Gifted Students

Arizona Ass'n for the Gifted and Talented
P.O. Box 31088
Phoenix, AZ 85046-1088
(602) 482-8415
http://www.azagt.org/
e-mail info@aagt.org

National Association for Gifted Children
1707 L Street, NW, Suite 550
Washington, DC 20036
1-202- 785-4268
http://www.nagc.org

American Association for Gifted Children
Box 90270
Durham, North Carolina 27708-0270
http://www.aagc.org/index.html

World Council for Gifted and Talented Children, Inc.
18401 Hiawatha Street
Northridge, CA 91326, USA
1-818-368-7501
http://www.worldgifted.org/

The Gifted Child Society
190 Rock Road
Glen Rock, New Jersey 07452-1736
1-201- 444-6530
http://www.gifted.org/

Hollingworth Center for Highly Gifted Children
827 Center Ave. #282
Dover, NH 03820-2506
http://www.hollingworth.org

*The Hollingworth Center is currently reorganizing. Check their website for updates.

The Association for the Gifted (TAG)
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091.
1-800-845-6232
http://education.boisestate.edu/tag/

Supporting Emotional Needs of Gifted
P.O. Box 6550
Scottsdale, AZ 85261
1-602-399-9090
http://www.SENGifted.org

California Association for the Gifted
5777 West Century Blvd., Suite 1670
Los Angeles, CA 90045
1-310- 215-1898
http://www.CAGifted.org/

National Inventive Thinking Association
P O Box 836202
Richardson, TX 75083
1- 972-448-2847
http://www.newhorizons.org/ofc_nita.html

***Mathematics Foundation of America**
3560 Pine Grove Avenue
Port Huron, MI 48060
1-519-672-7990
http://www.mfoa.org:80/index.htm
e-mail: nfo@mfoa.org

***The National Foundation for Gifted and Creative Children**
395 Diamond Hill Road
Warwick, Rhode Island 02886
401-738-0937
http://www.nfgcc.org/

* Foundations organized to accrue funds and award scholarships to exceptionally gifted young people for special programs or schools

Journals and Magazines for Gifted Educators and Parents

Gifted Child Quarterly
National Association for Gifted Children
1707 L Street, NW, Suite 550
Washington, DC 20036
1-202- 785-4268
http://www.nagc.org
available only with NAGC membership

Parenting for High Potential
National Association for Gifted Children
1707 L Street, NW, Suite 550
Washington, DC 20036
1-202- 785-4268
http://www.nagc.org
with NAGC membership or by subscription

Journal for the Education of the Gifted
Prufrock Press
100 North 6th Street, Suite 400
Waco, TX 76701-2032
http://education.boisestate.edu/tag/
available with CEC TAG division membership or by subscription

Gifted Child Today
http://www.profrock.com/mag_gct.html

Journal of Secondary Gifted Education
Prufrock Press
100 North 6th Street, Suite 400
Waco, TX 76701-2032
http://www.prufrock.com/

Roeper Review
P. O. Box 329
Bloomfield Hills, MI 48303
http://www.roeperreview.org/

Highly Gifted Children
Hollingworth Center Newsletters
c/o Jill Howard
4000 Greenmead Road
Winston-Salem, NC 27106
http://www.hollingworth.org/newsletter.html

Challenge Magazine
PO Box 55681
Boulder, CO 80322-5681
http://www.frankschaffer.com/challeng.html

Gifted Education Review
P.O Box 2278
Evergreen, CO 80437-2278
1-800-643-2194
pkeducre@aol.com

The Potential
Arizona Ass'n for the Gifted and Talented
P.O. Box 31088
Phoenix, AZ 85046-1088
http://www.azagt.org/

CAG Communicator
California Association for the Gifted
5777 West Century Blvd., Suite 1670
Los Angeles, CA 90045
http://www.cagifted.org/

Understanding our Gifted
Open Space Communications
PO Box 18268
Boulder, CO 80308-8268
1-800-494-6178
http://www.openspacecomm.com/

Gifted Education Press Quarterly
10201 Yuma Court
P. O Box 1586
Manassas, VA 22110.

Gifted and Talented International
College of William and Mary
P. O. Box 8795
Williamsburg, VA 23187-8795, USA
1-757-221-2185
http://www.worldgifted.org/xwebix.htm

Duke Gifted Letter
Duke University T.I.P.
1121 West Main St., Ste. 100
Durham, NC 27701
1-919-683-1400
http://www.tip.duke.edu/

Journals and Magazines for Gifted Students

Creative Kids*
Prufrock Press
100 North 6th Street, Suite 400
Waco, TX 76701-2032
1-800-998-2208
http://www.prufrock.com/index.cfm

Stone Soup*
Children's Art Foundation
765 Cedar St # 201
P. O. Box 83
Santa Cruz, CA 95060-4368
1-831-426-5557
http://www.stonesoup.com/

Cricket Magazine Group*
Baby Bug - Lady Bug - Spider
Cricket - Cicada
Click - Muse
Carus Publishing Company
315 5th St
Peru, IL 61354-2859
1-815-224-6656
http://www.cricketmag.com/

Appleseeds, Calliope, Cobblestone
Faces, Footsteps, Odyssey
Cobblestone Publishing Co.
30 Grove St # C
Peterborough, NH 03458-1445
1-800-821-0115
http://www.cobblestonepub.com/

National Geographic World
National Geographic Society
1600 M Street NW
Washington, DC 20036
1-202-857-7700
1-800-368-2728
http://www.nationalgeographic.com/

Ranger Rick, Your Big Backyard
National Wildlife, International Wildlife
National Wildlife Federation
1400 16th St NW # 501
Washington, DC 20036-2217
1-202-797-6800
http://www.nwf.org/printandfilm/

Imagine
P. O. Box 3073
Langhorne, PA 19047
1-215- 826-0707
http://www.jhu.edu/gifted/imagine/

Teen's World*
Timed Resources, Inc.
8655 East Via De Ventura, Suite G-150
Scottsdale, AZ 85258
http://www.childrensmagazine.com/

New Moon*
New Moon Publishing
Duluth, Minnesota
http://www.newmoon.org/

Puzzlemania, Mathmania
Which Way U.S.A., Top Secret Adventures
Highlights for Children*
803 Church Street
Honesdale, PA 18431
1-570-253-1080
http://www.highlights.com

On-line e-zines

Cyberteens*
Cyberkids*
Able Minds, Inc.
1750-1 30th St. #170
Boulder, CO 80301-1024
1-415-752-6515
http://www.cyberteens.com/cr/
http://www.cyberkids.com/cw/

Young Composers*
Able Minds, Inc.
1750-1 30th St. #170
Boulder, CO 80301-1024
1-415-752-6515
http://www.youngcomposers.com/

* Magazines that publish the creative work of students. † Does not pay contributors under the age of 15

Books about Pre-College Programs and Scholarships

Advisory List of International Educational Travel And Exchange Programs
212 South Henry Street
Alexandria, VA 22314
703-739-9059

Center for Talent Development Educational Program Guide
Northwestern University
617 Dartmouth Place
Evanston, IL 60208
847-491-3782

Summer on Campus: College Experiences for High School Seniors
College Board Publications
Box 886
New York, NY 10101-0886

Computerized Database of Summer Programs for Gifted and Talented Students
The Council for Exceptional Children
1920 Association Drive
Reston, VA 22091
1-800-232-7323

Summer Opportunities for Kids and Teenagers
Peterson's Guides
P. O. Box 2123
Princeton, NJ 08543-2123
1-800-338-3282

2000 Hispanic Scholarship Directory
National Association of Hispanic Publications
941 National Press Building
Washington, DC 20045

Appendix A:

Current State-Approved Test List and Publishers

Year 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
ACT	11-12		X	X	X	O	G	X	X	175	X

COMMENTS: Date of most recent edition: Updated Annually

Administered at selected sites on designated dates.
Special provisions can be made for students who have diagnosed physical or hearing disabilities that require extended time or special materials. Special testing materials include large-type test booklets and worksheets, and raised-line drawings for students with visual impairments.

This is a very high level reasoning test with extensive national norms.

ACT/PLAN	10th		X	X	X	O	G	X	X	195	X

COMMENTS: Date of most recent edition: Updated Annually

Administered at selected sites on designated dates.
Special provisions can be made for students who have diagnosed physical or hearing disabilities that require extended time or special materials. Special testing materials include large-type test booklets and worksheets, and raised-line drawings for students with visual impairments.

This is a very high level reasoning test with extensive national norms.

ACT/EXPLORE	8th		X	X	X	O	G	X	X	150	X

COMMENTS: Date of most recent edition: Updated Annually

Administered at selected sites on designated dates.
Special provisions can be made for students who have diagnosed physical or hearing disabilities that require extended time or special materials. Special testing materials include large-type test booklets and worksheets, and raised-line drawings for students with visual impairments.

This is a very high level reasoning test with extensive national norms.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
* Bateria-R Woodcock-Muñoz	Prek-12	2-79	O	X	O	X	I	P	P	90-120	X

COMMENTS: Date of most recent edition: 1988
*This is a direct translation of the Woodcock-Johnson Cognitive Battery. Relies heavily on concepts more common to the English language.

Cognitive Abilities Test (Cog AT)	K-12	5-18	X	X	X	X	G	O	O	90	X *

COMMENTS: Date of most recent edition: FORM 6, 2001 **

Students, who achieve a composite score of 97%-ile or above, qualify for placement in a gifted program.
** FORM 5, 1993, to be replaced with FORM 6 on 8/1/04.
*Non-verbal section available with Spanish instructions.
Test may not be appropriate for students with limited educational experiences.
In the non-verbal section, spatial reasoning and abstract reasoning are combined.
Option of hand scoring or machine scoring.
*Accommodations are identified for use with students with disabilities and language differences in Form 6.

Cognitive Assessment System (CAS)	K-12	5-17.10	O	O	O	X	I	P	P	60	X

COMMENTS: Date of most recent edition: 1997

Norm sample included gifted students and students with disabilities.

Comprehensive Testing Program, Third Edition (CTP – III)	1-12		O	X	X	O	G/I	O	O	240+	X

COMMENTS: Date of most recent edition: Updated Annually

Special accommodations are available for LEP populations.
Machine scored by company. Very high ceiling.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
Developing Cognitive Abilities Test Second Edition (DCAT)	1-12	6-17	X	X	X	X	G	O	O	60	X

COMMENTS: Date of most recent edition: 1990

It may be used through the end of 2002 school year.
On July 1, 1999, the publisher discontinued publication. Students who achieve a composite score of 97%-ile or above, qualify for placement in a gifted program.

Differential Abilities Scale (DAS)	Pre K - 12	2.6-17.11	X	X	X	X	I	P	X	45-65	X

COMMENTS: Date of most recent edition: 1990

The norming sample included minority populations matched to US census ratios. Afro-American and Hispanic children were oversampled.

Differential Aptitude Test - Fifth Edition Forms S, T, V, W, C	7 – Adult		O	X	X	X	G	X	X	120	O

COMMENTS: Date of most recent edition: 1990

Separate scores available to distinguish spatial reasoning (space relationship subtest) from abstract reasoning (abstract reasoning subtest) for identification of non-verbal reasoning.
Separate scores available to distinguish verbal reasoning (verbal reasoning subtest) and quantitative reasoning (numerical reasoning subtest).
Perceptual speed and accuracy, mechanical reasoning, space relations, spelling and language usage subtests available to provide academic counseling.
Career Interest Inventory available as an optional tool for use in guidance and counseling.
Computer assisted version adapted from form V available.

Escala de Intelligencea Wechsler Para Niños	1-12	6-16.11	X	X	O	X	I	P	P	60	X

COMMENTS: Date of most recent edition: 1974

This measure was normed in Puerto Rico. Norms were obtained during the 1986-1987 and the 1989-1990 academic years.
This test is a direct translation of the WISC-R. Relies heavily on concepts more common to the English language.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
Leiter-R	Pre K -12	2-20	X	O	O	X	I	X	X	40	X*

COMMENTS: Date of most recent edition: 1995-1996

*For use only for students with speech, language, and/or hearing impairments.

Matrix Analogies Test-Expanded Form	Pre K -12	5-17	O	O	O	X	I	O	O	30	X

COMMENTS: Date of most recent edition: 1985

To be replaced with the Naglieri Nonverbal Ability Test (N-NAT) on August 1, 2002.

Matrix Analogies Test- Short Form	K-12	5-17.11	O	O	O	X	G	O	O	Un-timed	X

COMMENTS: Date of most recent edition: 1985

To be replaced with the Naglieri Nonverbal Ability Test (N-NAT) on August 1, 2002.

Naglieri Nonverbal Ability Test (NNAT)	K-12	5-18	O	O	O	X	G	O	O	45	X

COMMENTS: Date of most recent edition: 1997

The norming sample included minority population and students with disabilities.

Otis-Lennon School Ability Test Seventh Edition (OLSAT)	K-12	6-17	X	X	O	X	G	O	O	60-75	X

COMMENTS: Date of most recent edition: 1996

SIXTH EDITION to be replaced with SEVENTH EDITION on August 1, 2001. Students, who achieve a composite score of 97%-ile or above, qualify for placement in a gifted program.
The norming sample included minority populations matched to US census ratios.
Various modality and timed portions can be selected for students with disabilities.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
Preliminary Scholastic Aptitude Test (P-SAT)	10-11		X	X	X	O	G	X	X	130	

COMMENTS: Date of most recent edition: Updated Annually

Administered at selected sites on designated dates.

This test functions as a valid practice test for SAT-1. The test is also used to determine who qualifies for National Merit Scholarships. The scores used for National Merit Scholarships are calculated by doubling the verbal score and adding the mathematics score to the product. Note that this process weights the verbal score more heavily than the mathematics score.

RAVEN-Coloured Progressive Matrices	K-5	5-11	O	O	O	X	G	O	O	15-30	X

COMMENTS: Date of most recent edition: 1986

There are other non-verbal measures available that have technically adequate norms.

RAVEN-Standard Progressive Matrices	2-10	8-Adult	O	O	O	X	G	O	O	30/45	X

COMMENTS: Date of most recent edition: 1986

There are other non-verbal measures available that have technically adequate norms.

RAVEN-Advanced Progressive Matrices	9-12	14-Adult	O	O	O	X	G	O	O	30/40	X

COMMENTS: Date of most recent edition: 1983

There are other non-verbal measures available that have technically adequate norms.

Scholastic Aptitude Test (SAT)	7-12	12-18	X	X	X	O	G	X	X	420	X

COMMENTS: Date of most recent edition: Updated Annually

Administered at selected sites on designated dates.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
School and College Abilities Test (SCAT)	3.5-12	9-18	O	X	X	O	G	O	O	40	O

COMMENTS: Date of most recent edition: 1996

No longer published, but can obtain permission to copy.
Test may not be appropriate for students with limited educational experiences.

Stanford Binet. Intelligence Scales, Fourth Edition	Pre K –12	2.5-Adult	X	X	X	X	I	P	P	45-90	X

COMMENTS: Date of most recent edition: 1986

Students who achieve a composite score of 97%-ile or above qualify for placement in a gifted program. Specific subtests may be selected for students with disabilities.

Universal Nonverbal Intelligence Test (UNIT)	K-12	5-18	X	X	O	X	I	X	X	Un-timed in parts	X*

COMMENTS: Date of most recent edition: 1999

*Excellent for language minority students because it can be administered non-verbally by an administrator who does not share the child's primary language.
*Because physical manipulation of test materials is required, the UNIT may be of limited use for children with fine motor impairment.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
Wechsler Intelligence Scale for Children-Revised (SPANISH)	1-12	6-16.11	X	X	O	X	I	P	P	60	X

COMMENTS: Date of most recent edition: 1974

This measure was normed in Puerto Rico.
Norms were obtained during the 1986-1987 and the 1989-1990 academic years.
The test is a direct translation of the WISC-R.
Relies heavily on concepts more common to the English language.

Wechsler Preschool and Primary Scale of Intelligence - R (WPPSI-R)	Pre K –2	3-7	X	X	O	X	I	P	P	60	X

COMMENTS: Date of most recent edition: 1989

The norming sample included minority populations matched to the 1986 US Census Survey.
This test does not have adequate ceiling for six and seven year olds.

Wechsler Adult Intelligence Scale III (WAIS III)		16-89	X	X	O	X	I	P	P	75	X

COMMENTS: Date of most recent edition: 1997

The norming sample included minority populations matched to the 1995 US Census.
This test is the revision of the Wechsler Adult Intelligence Scale-Revised.

Wechsler Intelligence Scale for Children 3rd Ed (WISC-III)	1-12	6-16	X	X	O	X	I	P	P	60	X

COMMENTS: Date of most recent edition: 1991

The norming sample included minority populations matched to the 1990 US Census ratios.
The test is the revision of Wechsler-Intelligence Scale for Children-Revised.

YEAR 2001 TEST LIST FOR THE IDENTIFICATION OF GIFTED STUDENTS IN ARIZONA

KEY: O = No X = Yes G = Group I = Individual P = Psychologist TEST NAME	GRADES	AGES	COMPOSITE	VERBAL	QUANTITATIVE	NON-VERBAL	GROUP/INDIVIDUAL	TRAINED PERSONNEL IN ADMINISTRATION	TRAINED PERSONNEL IN INTERPRETATION	TIME IN MINUTES	SPECIAL POPULATIONS
Woodcock-Johnson Psycho-Educational Battery, Parts I&II (SPANISH) "BATERIA"	Pre K –12	4-Adult	O	X	X	X	I	X	X	90	X

COMMENTS: Date of most recent edition: 1982

This is a direct translation of the original Woodcock-Johnson Psycho-Educational Battery. The norms have not been updated since 1982 and are not based on a Spanish speaking population.
May need to be substantiated by performance on other measures.

Woodcock-Johnson Cognitive Battery	Pre K –12	2-79	O	X	O	X	I	P	P	90-120	X

COMMENTS: Date of most recent edition: 2001*

*The 1989 edition will be replaced with the 2001 edition, which is the Woodcock-Johnson III Tests of Cognitive Ability, on 8/01/03.

Year 2001 List of Publishers of Tests for Identifying Gifted Students in Arizona

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Mr. Mickey Geenan
Senior Measurement Consultant
Harcourt Educational Measurement
4308 N. 87th Place
Scottsdale, AZ 85251
Telephone:(480) 941-1977
Fax: (480) 941-3448

19500 Bulvere Road
San Antonio, TX 78259
Telephone:(800) 228-0752, Ext. 5188

Matrix Analogies Test – Expanded Form (MAT)

Matrix Analogies Test – Short Form (MAT)

Naglieri Nonverbal Ability Test (NNAT)

Otis-Lennon School Ability Test, Seventh Edition (OLSAT)

Wechsler Intelligence Scale for Children Revised (Spanish)
Escala de Inteligencia Para Niños

Wechsler Preschool and Primary Scale of Intelligence (WPPSI-R)

Wechsler Adult Intelligence Scale – III (WAIS-III)

Wechsler Intelligence Scale for Children Third Edition (WISC-I

Dr. Grover Foehlinger
Harcourt Educational Measurement
19500 Bulvere Road
San Antonio, TX 78259
Telephone: (858) 481-7137
Telephone: (800) 228-0752, Ext. 5154

Differential Abilities Scale (DAS)

Differential Aptitude Test, Fifth Edition, Forms S, T, V, W, C **(DAT)**

Raven Progressive Matrices
- Coloured
- Standard
- Advanced

Dr. Dave Madsen, Ph.D.
Stoelting Inc.
620 Wheat Lane
Wood Dale, IL 60191
Telephone: (630) 860-9700
Fax: (630) 860-9775

Leiter R

Dr. Carol Mills
Institute for the Academic Advancement of Youth
Johns Hopkins University Research Dept., 4th Floor
3400 N. Charles Street
Baltimore, MD 21218
Telephone: (410) 516-0337
Fax: (410) 516-0108

School and College Abilities Test (SCAT)

Ms. Anita O'Brien
PSAT/NMSQ.T.
P.O. Box 6720
Princeton, NJ 08541-6720
Telephone: (609) 771-7070
Fax: (609) 683-2280

Preliminary Scholastic Aptitude Test (PSAT/NMSQ.T.)

Scholastic Aptitude Test (SAT)

Dr. Elma N. Pineda-Raney, Ed.D.
Evaluation and Guidance Specialist
1408 Somerset Drive NW
Albuquerque, NM 87120
Telephone: (505) 839-1534
Fax: (505) 839-1532
Voice Mail: (800) 323-9540, Ext 7793
E-Mail: elmapineda-raney@hmco.com
Cognitive Assessment System (CAS)

Stanford-Binet Intelligence Scale, Fourth Edition

Woodcock-Johnson Cognitive Battery

Woodcock-Johnson III Tests of Cognitive Abilities

Woodcock-Muñoz, Bateria – R
Woodcock Johnson, Psycho-educational Battery Parts I and II, Spanish

Cognitive Abilities Test (Cog AT)

Universal Nonverbal Intelligence Test (UNIT)

Mr. Ernest Valdez
Daily News Building
ACT Inc.
10419 Old Placerville Road
Suite 262
Sacramento, CA 95827
Telephone:(916) 361-0656
Fax: (916) 361-0699

ACT Assessment
(College Admissions)

PLAN (Formerly the P-ACT-Plus Assessment)
(Gr. 10)

EXPLORE (Gr. 8)

Developing Cognitive Abilities Test,
Second Edition (DCAT)

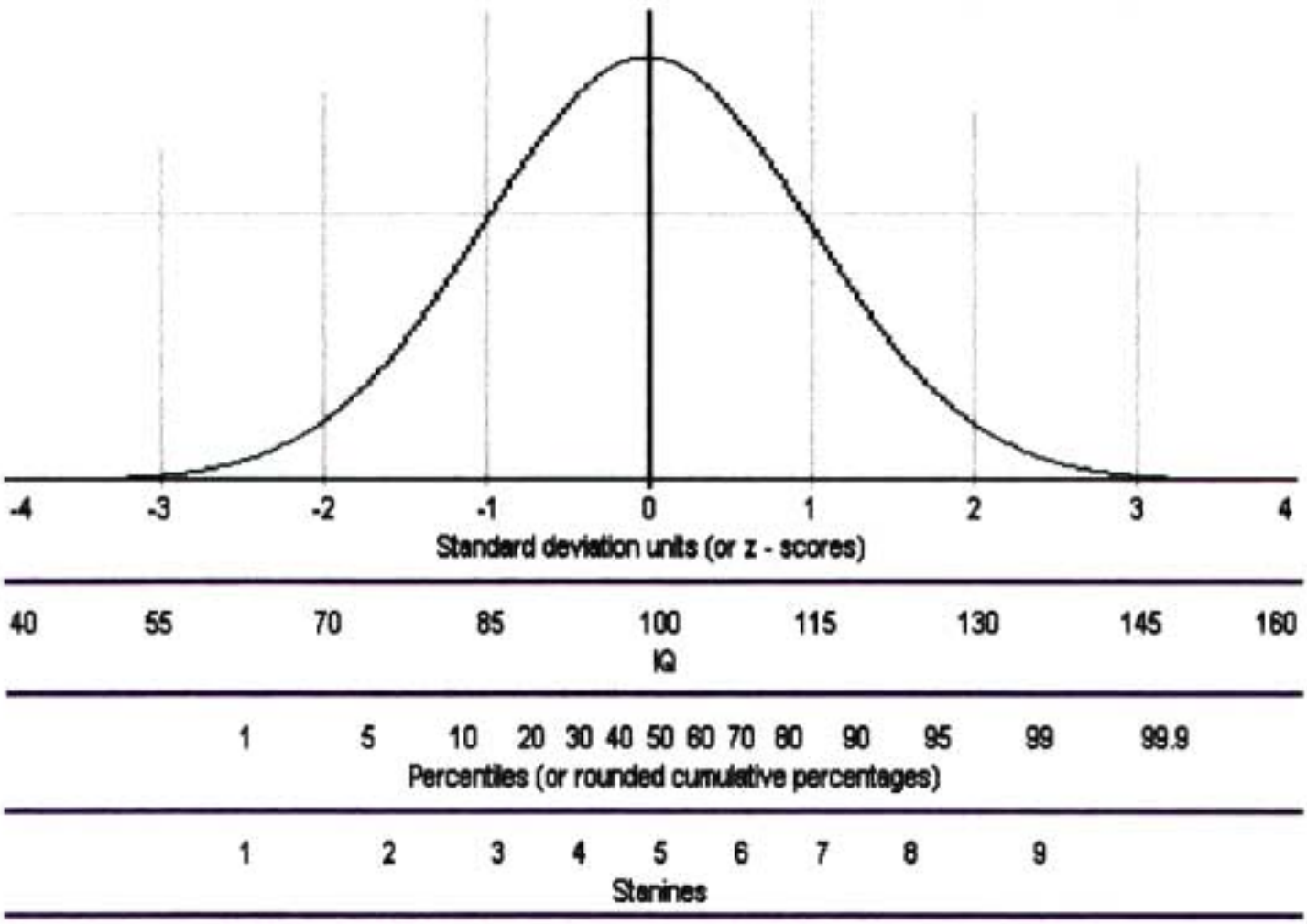
Education Research Bureau
Daily News Building
220 East 42nd Street, Suite 100
New York, NY 10017
Orders - Telephone: (609) 683-2334
Orders – Fax: (609) 683-2060

Comprehensive Testing Program
Third Edition
(CTP III)

Appendix B:

Example of a Normal Distribution

Example of a Normal Distribution



Many researchers have assumed that human abilities, such as intelligence, are distributed evenly around a central norm. This example of a statistically normal distribution shows the relationships of standard deviations, ratio scores (the norm arbitrarily sets the mean at 100 and standard deviations at 15 in this example), percentile ranks, and stanines.

Appendix C:

Sample Nomination Forms

Gifted and Talented Education Indicators and Descriptors of Checklist Behaviors[2]

HUMOR ♥ creates things that are funny (e.g., cartoons, stories, constructions, songs, dramatic expressions, physical movements) ♥ uses concepts or vocabulary from first or second language inappropriately to make people laugh ♥ shows a sense of humor that eases tension in a group or that delights, entertains, or surprises other people – either age-mates or adults	**MOTIVATION** ♥ works continuously after others have stopped (e.g., draws, constructs, reads, writes, talks, creates, listens to music) ♥ desires explanations (e.g., verbal and/or non-verbal) ♥ appreciates challenges and demonstrates task commitment ♥ appears to put entire heart and soul into self-selected tasks	**INTERESTS** ♥ demonstrates an intense interest in "tools" or products of one or more intelligences or domains (e.g., art supplies, books, musical instruments, people, sports, arts, sciences, languages, history, puzzles, games that require logical thinking) ♥ collects things ♥ forms or joins groups to promote change or accomplish tasks
COMMUNICATION/EXPRESSIVENESS ♥ conveys meaning effectively through any means (e.g., photography, graphs, structures, paintings, gestures, words, music, dance, interactions) ♥ creates moods, ambiance in an environment ♥ creates products that "speak" for themselves ♥ shows or performs steps used to solve a problem even though s/he may not be able to explain steps verbally	**INQUIRY** ♥ wants to touch, create, experiment, probe ♥ questions (e.g., why?, how?, when?, how come?) ♥ observes intently ♥ uses a variety of tools to access information (e.g., books, people, technology, news reports, magazines)	**PROBLEM-SOLVING** ♥ creates complex, intricate products (e.g., stories, graphs, songs, demonstrations presentations, dances, musical pieces, plays) ♥ organizes the group to accomplish the task ♥ proposes unique solutions to problems ranging from simple to complex ♥ invents new ways to achieve a goal and creates personal challenges ♥ seeks or creates problems to solve
SENSITIVITY ♥ notices similarities and differences in the world around him/her (e.g., in mathematical concepts or symbols; variations in color, light, or shape; variations in pitch, tone) ♥ recalls verbal and/or non-verbal details ♥ senses discord and lack of harmony ♥ knows the "right" thing to do or say in uncomfortable situations ♥ detects movements/sounds missed by others	**INTUITION** ♥ notices connections between/among diverse ideas or objects but may not be able to explain connections ♥ readily connects abstract ideas ♥ may/may not be able to explain insights immediately or in terms understandable to others ♥ interrupts others to share insights ♥ sees the key problem in a fuzzy situation ♥ experiences frequent "AHA's"	**REASONING** ♥ gathers and organizes material before embarking on a task ♥ clearly knows how to progress from point A to B in an efficient and effective manner ♥ develops plans ♥ indicates desire to attain a goal (e.g., learn how to ride a bike, compose a song about _____, draw _____, write a story about ____,) and persists until goal is met ♥ makes predictions and inferences and connects causes and effects
IMAGINATION/CREATIVITY ♥ poses unique solutions and/or creates unusual products ♥ makes up new games and/or invents new rules for existing games ♥ adds interesting components to enhance products (e.g., subtle aspects of language to written/spoken works; interesting details to constructions, drawings, graphs; novel effects in plays, musical performances, sports performances) ♥ combines elements/materials in unusual ways	**MEMORY/KNOWLEDGE/ UNDERSTANDING** ♥ remembers and uses techniques introduced only once ♥ recalls information, discussions, incidents, stories, movies ♥ shares philosophical ideas ♥ recreates music, dances, movements ♥ imitates sports figures, political or TV personalities, dancers, actors	**LEARNING** ♥ grasps concepts introduced before all others in the class ♥ creates products (e.g., stories, drawings, constructions, plays, discussion, movements) that are more advanced than age-mates ♥ learns to read, write, calculate with relative ease ♥ learns a second language, new musical piece or movement, or mathematical or historical concept with ease
MORAL & ETHICAL CONCERNS ♥ holds strong opinions about BIG issues (e.g., fairness & justice war & peace, global warming, world hunger, unemployment) ♥ seeks resolution of moral dilemmas ♥ may "get stuck" if dilemma cannot be resolved to his/her satisfaction ♥ asks deep questions (e.g., "Why do things die?" "Why are kids mean to each other?")	Notes:	

[2] Adapted by J. A. Rogers from *Brilliant Behaviors*, ©1994, by L. S. Kanevsky, C. J. Maker, A. B. Nielson, & J. A. Rogers

Gifted and Talented Education

Teacher Checklist of Student Behavior

Child's Name _____ Age: Yrs._____ Mo._____ Grade____ EC_____
School _____ Classroom Teacher _____
Person Initiating Referral _____ Title _____
Person completing this form _____ Title _____

	Very Rarely		Sometimes		Very Frequently
Humor: Exceptionally keen sense of the comical, bizarre, absurd	1	2	3	4	5
Motivation: Intense desire to know, do, feel, create, or understand	1	2	3	4	5
Interests: Ardent, passionate, sometimes unusual, fleeting	1	2	3	4	5
Communication/Expressiveness: Extraordinary ability to convey meaning or emotion through words, actions, symbols, sounds, media	1	2	3	4	5
Inquiry: Probing exploration, observation, or experimentation with events, objects, ideas, feelings, sounds, media	1	2	3	4	5
Problem Solving: Outstanding ability to bring order to chaos through the invention and monitoring of paths to a goal; enjoyment of challenge	1	2	3	4	5
Sensitivity: Unusually open, perceptive, responsive to experiences, feelings, others	1	2	3	4	5
Intuition: Sudden recognition of connections or deeper meanings without conscious awareness of reasoning or thought	1	2	3	4	5
Reasoning: Outstanding ability to think things through and consider implications or alternatives; rich, high conscious, goal-oriented thought	1	2	3	4	5
Imagination/Creativity: Extraordinary capacity for ingenious, flexible use of ideas, processes, materials	1	2	3	4	5
Memory/Knowledge/Understanding: Unusual capacity to acquire, integrate, retain, and retrieve information or skills	1	2	3	4	5
Learning: Ability to acquire sophisticated understandings with amazing speed and apparent ease	1	2	3	4	5
Moral and Ethical Concerns: Intense need for fairness and justice; deep desire to take action to resolve injustices; concern for consequences of their actions.	1	2	3	4	5
Total in column					

List talent or special ability: _____

What specific concerns do you have regarding this student?_____
Please give specific examples that indicate to you that this child is gifted _____
Would you recommend this student for placement in the GATE program? Please check appropriate box

☐ Without Reservation ☐ Yes ☐ Perhaps ☐ Questionable ☐ No

Please return this form as per instructions on the cover letter or to the GATE office. Thank you for your cooperation.

Teacher's Signature _____ Date _____

Student behav ck list..d

Educación para Superdotados y Talentosos
Indicadores y Descriptores de las Conductas de la Lista de Verificación

HUMOR	MOTIVACIÓN	INTERESES
♥ origina cosas que son chistosas (esdeci cari-caturas, cuentos, construcciones, cantos, expresiones dramáticas, movimien-tos físicos) ♥ usa impropiamente los conceptos o vocabulario de su primer o segundo idioma para hacer a la gente reir ♥ *muestra un sentido de humor que disminuye latensión en un grupo o deleita, entretiene, sor- prende a otras personas – ya sea de la misma* ♥ edad del/de la niño(a) o persona adultas	♥ trabaja continuamente después de que otros han dejado de trabajar (es decir, dibuja, construye, lee, escribe, habla, origina cosas, escucha música) ♥ *desea que le den explicaciones (es decir, verbales y/o no verbales)* ♥ aprecia los retos y demuestra ser obligado(a) respecto a sus tareas ♥ parece poner todo su corazón y alma en las tareas que él/ella mismo(a) selecciona	♥ demuestra un intenso interés en las "herramientas" o productos de una o más inteligencias o dominios (es decir, materiale de arte, libros, instrumentos musicales, la gente, deportes, artes, ciencias, idiomas, historia, rompecabezas o juegos que requier uso del pensa-miento lógico) ♥ colecciona cosas ♥ forma o se afilia a grupos con el fin de promover un cambio o llevar a cabo las tare
COMUNICACIÓN/ EXPRESIÓN	**INVESTIGACIÓN**	**RESOLUCIÓN DE PROBLEMAS**
♥ comunica eficazmente el significado mediante cualquier manera posible (es decir, la fotografía, gráficas, estructuras, pinturas, ademanes, palabras, música, danza, interacciones) ♥ crea la disposición de ánimo; el ambiente en ciertas circunstancias ♥ crea productos que "hablan" por sí mismos ♥ muestra o lleva a cabo los pasos que se usan ♥ para solucionar un problema, aun cuando no ♥ pueda él/ella explicar los pasos verbalmente	♥ quiere tocar, crear, experimentar, escudriñar las preguntas (es decir, ¿por qué?, ¿cómo?, ¿cuándo?, ¿cómo es eso?) ♥ observa atentamente ♥ utiliza una variedad de herramientas para lograr acceso a la información (es decir, libros, personas, tecnología, informes noticieros, revistas)	♥ origina productos complicados, intrincados decir, cuentos gráficas, cantos, demostra-ciones, presentaciones, danzas, obras music o teatrales) ♥ organiza al grupo a fin de realizar una tarea ♥ propone soluciones singulares para problem que varían desde muy sencillos a complicad ♥ inventa nuevos modos de realizar una meta origina retos personales ♥ busca u origina problemas a ser resueltos
SENSIBILIDAD	**INTUICIÓN**	**RAZONAMIENTO**
♥ nota las similitudes y diferencias del mundo que le rodea (es decir, en los conceptos matemáticos o símbolos; variaciones en los colores, la luz, o figuras; variaciones en la altura, o tono del sonido) ♥ recuerda detalles verbales y/o no verbales ♥ percibe cuando hay discordia y falta de armonía ♥ sabe lo "correcto" qué hacer o decir en situaciones difíciles ♥ detecta movimientos/sonidos que otros no perciben	♥ nota la relación entre/en medio de diversas ideas ♥ u objetos, pero posiblemente no pueda explicar las conecciones ♥ relaciona fácilmente las ideas abstractas ♥ puede/o no explicar inmediatamente sus percepciones , o hacerlo en términos que otros puedan entender ♥ interrumpe a otros para compartir sus percepciones ♥ puede ver el problema principal en situaciones indistintas ♥ frecuentemente recibe un "¡AJÁ!"	♥ reune y organiza material antes de emprende una tarea ♥ sabe claramente cómo progresar del punto A B en una manera eficiente y eficaz ♥ desarrolla planes ♥ indica un deseo de realizar sus metas (es dec aprender a andar en bicicleta, componer un canto acerca de _____, dibujar un _____ escribir un cuento acerca de _____,) y persistir hasta que la meta es realizada hace predicciones e inferencias y relaciona l causantes con los efectos
IMAGINACIÓN/CREATIVIDAD	**MEMORIA/CONOCIMIENTO/ ENTENDIMIENTO**	**APRENDIZAJE**
♥ posee soluciones singulares y/u origina productos excepcionales ♥ origina nuevos juevos y/o inventa nuevas reglas para los juegos existentes ♥ agrega interesantes componentes para dar realce a los productos (es decir, aspectos sutiles del lenguage a obras escritas/ verbales; interesantes detalles a las construcciones, dibujos, gráficas; nuevos efectos en obras teatrales, actuaciones musicales, actuaciones deportivas) combina los elementos/materiales en maneras excepcionales	♥ recuerda e utiliza técnicas que son introducidas una sola vez ♥ recuerda información, discusiones, incidentes, cuentos, películas ♥ comparte sus ideas filosóficas ♥ origina de nuevo la música, danzas, movimientos ♥ imita a personajes de los deportes, la política, o la televisión; danzantes, actores	♥ entiende, antes que todos los otros estudiant de la clase, los concepto ntroducidos ♥ origina productos (es decir, cuentos, dibujos construcciones, obras teatrales, discusiones, movimientos) que son más avanzados que lo otros condíscipulos de su misma edad ♥ aprende a leer, escribir, calcular con relativa facilidad ♥ aprende con facilidad un segundo idioma, u nueva obra musical o movimiento; o un concepto de matemáticas o de historia
INTERESES MORALES Y ÉTICOS ♥ tiene fuertes opiniones acerca de temas IMPORTANTES (es decir, imparcialidad y justicia, guerra y paz, la temperatura cálida global, el hambre del mundo, el desempleo) ♥ busca la resolución de dilemas morales ♥ puede "estancarse" si el dilema no puede ser solucionado a su satisfacción propia hace preguntas profundas (es decir, "¿Por qué mueren las cosas?", "Por qué son malos los niños, unos con otros?")		Notas:

Educación para Superdotados y Talentosos

Lista de Verificación para Maestros Respecto a la Conducta Estudiantil

Nombre del/de la Niño(a) _____ Edad: Años ____ Meses ____ Grado ____ Código Étnico _____
Escuela _____ Maestro(a) del Salón de Clase _____
Persona que haya iniciado la remisión _____ Título _____
Persona que haya completado este formulario _____ Título _____

	Muy Rara Vez		**A Veces**		**Muy Fre-cuente mente**
Humor: Un sentido excepcionalmente intenso de lo cómico, excéntrico, absurdo	1	2	3	4	5
Motivación: Un deseo intenso por saber, hacer, sentir, crear, o entender	1	2	3	4	5
Intereses: ardiente, apasionado(a) a veces inusual, fugaz	1	2	3	4	5
Comunicación/ Expresión: Extraordinaria habilidad de comunicar significado o emoción mediante palabras, acciones, símbolos, sonidos, medios de comunicación	1	2	3	4	5
Investigación: Exploración probatoria, observación o experimentación con aconteci-mientos, objetos, ideas, sentimientos, sonidos, medios de comunicación	1	2	3	4	5
Resolución de Problemas: Sobresaliente habilidad de traer orden al caos mediante la invención y observación de maneras de realizar una meta; disfruta del ser retado(a)	1	2	3	4	5
Sensibilidad: Inusualmente abierto(a), perceptivo(a), reacciona a las experiencias, sentimientos, y a otras personas	1	2	3	4	5
Intuición: Un reconocimiento súbito de la relación entre las cosas, o de un significado más profundo; sin tener conocimiento consciente del razonamiento o pensamiento	1	2	3	4	5
Razonamiento: Sobresaliente habilidad de pensar bien las cosas y considerar las implicaciones o alternativas; pensamiento intenso, altamente consciente, orientado hacia el logro de las metas	1	2	3	4	5
Imaginación/Creatividad: Extraordinaria capacidad para el uso ingenioso, flexible de las ideas, procesos, materiales	1	2	3	4	5
Memoria/Conocimiento/Entendimiento: Capacidad inusal de adquirir, integrar, retener y recobrar información o habilidades	1	2	3	4	5
Aprendizaje: Habilidad de adquirir un entendimiento sofisticado con sorprendiente rapidez y aparente facilidad	1	2	3	4	5
Intereses Morales y Éticos: Necesidad intensa de imparcialidad y justicia; profundo deseo de tomar acción para solucionar la injusticia; se preocupa de las consecuencias de sus acciones.	1	2	3	4	5
Total de la columna					

Hágase una lista de los talentos o habilidades especiales del/de la estudiante: _____

¿Qué preocupaciones específicas tiene usted acerca de este(a) estudiante? _____
_____

Por favor dé ejemplos específicos que le indican a usted que este(a) niño(a) es superdotado(a) _____
_____

¿Recomendaría usted a este(a) estudiante para asignación al programa GATE? Por favor marque el cuadro apropiado.

☐ Sin Reserva ☐ Sí ☐ Tal Vez ☐ DuDoso ☐ No

Por favor devuelva este formulario. de acuerdo con las instrucciones en la carta, a la oficina GATE. Gracias por su cooperación.

Appendix D:
Sample Parent Letters

SAMPLE INVITATION TO TEST

(SCHOOL LETTERHEAD)

(DATE)

Dear Parent(s):

Last spring your son/daughter took an achievement test administered by _____ Unified School District. A review of your child's test result indicates that he/she scored very well on the test.

As a result of your child's high score on the achievement test, I am inviting you to have your child tested for possible participation in the district's Gifted Education (GATE) program. The GATE program provides educational enrichment for qualified students to meet their academic needs. Students must take the GATE test to be considered for placement in the GATE program. Students are not placed in the GATE program on the basis of their achievement test scores alone. Please see the enclosed brochure about gifted testing and services.

If you would like to have your child tested for the GATE program, you must sign a GATE testing permission form, which is available at your child's school. Permission forms must be turned in at your school by _____.

All GATE testing for children in kindergarten through eighth grade will be done at your child's home school during the week of _____. If your child is absent on the day of testing, a make-up test will be held on _____or _____, at _____ School. I hope you will consider having your child tested for the GATE program.

Sincerely,

Director
Gifted and Talented Education

(SCHOOL LETTERHEAD)
Distrito Escolar Unificado de _____
Educación para Superdotados y Talentosos

(DATE)

Estimados Padres:

La primavera pasada, su hijo/hija tomó una prueba de aprovechamiento administrada por el Distrito Escolar Unificado de Tucsón. Una revisión de los resultados de la prueba de su hijo(a) indica que sacó muy buen resultado en la prueba de aprovechamiento.

Como resultado del alta calificación en la prueba de aprovechamiento, les estoy invitando a que permitan que se le administre a su hijo(a) la prueba para su posible participación en el programa de Educación para Superdotados (GATE) del distrito. El programa GATE provee enriquecimiento educacional para estudiantes calificados, con el fin de atender sus necesidades académicas. Los estudiantes deben tomar la prueba GATE para ser considerados para asignación a este programa. Los estudiantes no son asignados al programa GATE de acuerdo con sus resultados en la prueba de aprovechamiento.

Si desean que se le administre la prueba a su hijo(a) para este programa. deben ustedes firmar un formulario de permiso de GATE, el cual se hace disponible en la escuela de su hijo(a). Los formularios de permiso deben ser retornados a su escuela a más tardar, el viernes, 10 de diciembre, o a las Escuelas de Año Extendido, el miércoles 24 de noviembre.

Todas las pruebas de GATE para niños de kindergarten hasta el grado ocho se administrarán en la escuela asignada de su hijo(a) durante el mes de enero. Si su hijo(a) se ausenta el día de la prueba, se administrará otra prueba el sábado, 29 de enero, en la Escuela Secundaria de Atracción Tucsón. Espero que consideren el que su hijo(a) tome la prueba para el programa GATE.

Atentamente,

J. Jeffrey Hipskind, Director
Educación para Superdotados y Talentosos

JJH/dlb

9900 Invite to test - Spanish.doc 10/99
Traducción: Lydia V. García. Traductora del
TUSD FILE: SPECED\ACHIEVETEST LTR.DOC

SAMPLE INVITATION TO TEST

(DATE)

To the Parents or Guardians of _____

Your child's teacher at _____Elementary School has recommended that your child be tested for possible high reasoning ability. This testing helps teachers know how to plan for your child's academic needs. If your child is advanced, he or she may need special provisions. Children who score in the 97th percentile or above will be eligible for services through the school gifted program.

Testing will take place the first week of _____. For your child to be tested, we will need your written permission on or before _____. Please complete the short form below, tear off and return to your child's teacher.

Testing will be done in three one-hour sessions. No special preparation or study is needed. Just ensure that your child gets adequate sleep and has a healthy breakfast during the week of testing. Then send him off relaxed.

When all testing has been completed, you will be notified of the results. Following testing there will be a parent meeting to explain services available through the gifted program. If you have questions about the gifted program or testing, please refer to your school handbook, printed brochure about gifted program services or call the teacher of gifted at your local school.

Sincerely,

Jack Jones
Teacher

Enc: School district brochure about gifted program options

_ _

Parent Permission for Testing

I give my permission for my child, _____,to participate in testing

for the gifted program. Signature: _____Today's Date:_____

SAMPLE TEST RESULTS LETTER

(DATE)

Dear Parent or Guardian:

Your child was recently tested for the gifted program. A score of 97th percentile or more in any one of the three testing areas listed below qualifies a student for the gifted program. Your child's test scores are listed below. A score of 95th percentile means your child scored in the top 5% of all students who take this test using national norms.

Your child's scores on the (name of test) Test for 2001-2002 are:

Verbal __________ Quantitative ________ Non-verbal __________

If your child scored 97% or better in one of the three areas, he or she qualifies for services offered through the gifted program. For example, if your child scored in the 97th percentile in quantitative but received a score below 97th percentile in the other areas, it means that your child qualifies for gifted services in the quantitative or mathematics area. If none of the three scores are at the 97th percentile, your child does not meet the criteria for the gifted program at this time.

There will be a parent information meeting at 7:00 p.m. Monday evening, _________, at the elementary school library to answer questions parents may have about either testing or services. All parents whose children were tested are welcome. Please see the enclosed brochure about gifted programming and testing.

Thank you for participating in the testing program. Your child's scores will become a part of his/her cumulative record and will alert educators to your child's academic strength areas.

Sincerely,

Jill Jones
Gifted Program Coordinator

- -

Permission for Gifted Education Services

I give my permission for ________________________________ to participate in the gifted

Program activities of ________________________________ school for the year 2001-2002.

Parent signature: _______________________________________ Date: ______________

SAMPLE TEST RESULTS LETTER

(SCHOOL LETTERHEAD**)**

(DATE)

Dear Parent or Guardian,

Your child, _____meets the criteria for participation in the

_____program for academically gifted and talented students. We need your

permission to place your child in the program for next year. Please respond and return to your

child's teacher by June 1, 200_.

I/We hereby **_____GIVE**

_____ DO NOT GIVE

permission for our child to participate in the (YOUR NAME) program for academically gifted

students.

_____
SIGNATURE OF PARENT OR GUARDIAN

If you have questions about the testing, please call the teacher of gifted for assistance. The teacher of gifted may refer you to the school psychologist for further information.

Sincerely,

_____
Principal

Appendix E

A Multiple Entry Approach

A Multiple Entry Approach

Selection and Placement

Arizona law mandates that children who score at or above the 97th percentile on a state-approved aptitude test receive program services to support their developmental needs. Problems associated with test reliability, particularly with students who do not test well, require that school personnel also develop or adopt alternative criteria through which a student's need for gifted services can be documented. Using **only** tests or **only** alternative assessments lacks reliability.

Perhaps the best solution is to construct alternative methods of entry – either a test score at or above the 97th percentile **or** a score in the above average (but not quite gifted) range combined with other factors (e.g., recommendations, performing work well above grade level, demonstrated creativity, advanced performance in a disciplinary area, or evidence of a high level of motivation). Variations can be factored in for students who may have a disabling condition, linguistic or cultural differences, or disadvantages due to poverty or isolation.

One such approach is a plan called the Multiple Gateways Approach (Cohn & Payne, 2000). Criteria are jointly established, by program teachers and district coordinators, in selected areas based on the program services to be provided. Varied combinations of test scores and meeting or surpassing criterion in one or more areas document the need for program services. A multiple gateway approach is context-specific. Gateways to an accelerated mathematics program would be different than gateways to a writer's workshop, for example. Gateways for students at secondary level would differ from those for students at kindergarten level. In the model designed by Cohn and Payne, the selection committee has the latitude to determine that a student who just missed reaching criterion level in several of the options should be served in the program.

The Cohn-Payne model is designed for a particular program for high school students. Like this approach, each identification system should be closely tied to the type of program services that a local agency plans to provide. If services are to commence in kindergarten or first grade, the identification strategy will be different from a strategy designed for older students. If the multiple gateways practice is adopted, it should be approved in policy by the local Board of Education. It should also be approved by the gifted office of the Arizona Department of Education.

Identification strategies for students who have an educational disadvantage--linguistic, cultural, disabling -- must be different from strategies used for more advantaged students.

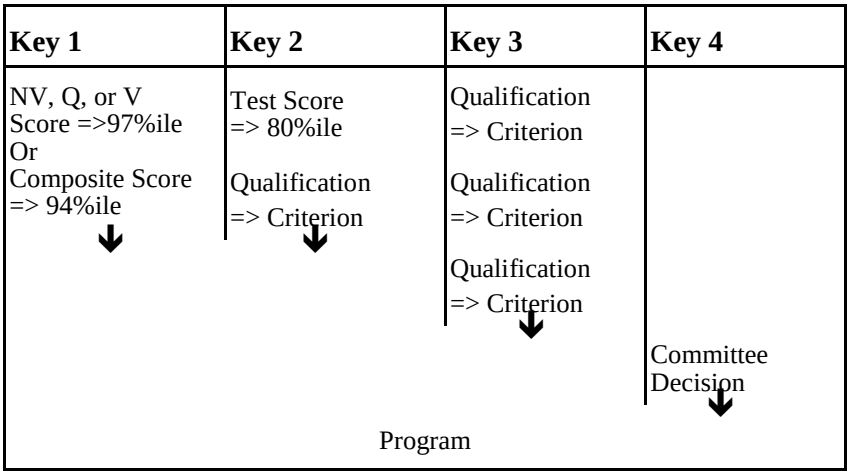
If visual and performing arts are integrated into a program for gifted students, identification strategies will differ from strategies for a gifted program with a focus on mathematics and writing.

Finally, programs should be designed to meet the needs of gifted students in a school or district. The identification process and the school or district program for gifted students must be adapted to local needs and may vary from one year to another just as the strengths of gifted students will vary among different groups of students.

The following model is not the model designed by Cohn and Payne. Rather, it is an adaptation of their model intended for use in a middle school setting.

Identification Model for Gifted Students in Prototype Middle School
Transdisciplinary Program for Gifted Students

Identification Keys



=> Equal to or greater than

Criteria for Excellence: Evidence that the student is performing, or is capable of performing, far above the norm in at least one domain of intelligence must be one of the criteria.

- Test scores must be obtained from performance on one or more state-approved tests. Non-test documentation may be provided in the following areas:

  - Recommendation, with specific examples of student strengths, from a teacher, mentor, or other qualified person who has been involved in the student's educational development.
  - Ratings of student products or performances from qualified evaluators in that domain.
  - Documentation of leadership ability and/or interpersonal intelligence as demonstrated in such areas as community work, school or classroom governance, team projects, conflict management, etc.
  - Evidence of creativity such as ratings on a recognized creativity assessment instrument, examples of inventions or unique products created by the student, or performance in creative problem solving competitions .
  - Evidence of advanced development in one or more domains, such as high grades or previous placement in a program for gifted students,

The qualifications of each student will be reviewed by a committee of three to five members with expertise in at least one of the following areas: a) education of gifted students, b) adolescent development, c) assessment, d) parenting gifted children, e) visual or performing arts, or f) counseling. Members will use their clinical judgment to identify each student *who, due to superior intellect or advanced learning ability, needs special instruction or special ancillary services, or both, to achieve at levels commensurate with his [or her] intellect and ability.*

In addition, the selection committee will recommend individual interventions necessitated by accompanying factors such as significant differences in intellectual abilities, a disabling condition, diverse cultural or linguistic background, or socio-economic deprivation.

Appendix F:

Visual-Spatial Learners

Visual Spatial Learners

Linda Silverman

http://gifteddevelopment.com/ArticlesNSL%20Char%20Comparison.htm

Characteristics

Logical-sequential Learner	Visual-spatial Learner
Is a step-by-step learner	Is a whole-to-part learner
Has auditory strengths	Has visual strengths
Learns by trial and error	Learns concepts all at once
Is an analytical thinker	Is a good synthesizer
Attends well to details	Sees the big picture; may miss details
Does well at arithmetic	Is better at math reasoning than computation
Follows oral directions well	Reads maps well
Learns phonics easily	Learns sight words better than phonics
Can sound out spelling words	Must visualize words in order to spell them
Excels at rote memorization	Learns best by seeing relationships
Has excellent short-term memory	Has excellent long-term memory
Has neat handwriting	Prefers keyboarding to writing
Is well organized	Creates unique methods of organization
Progresses sequentially from easy to difficult material	Learns difficult concepts easily; struggles with easy skills
Learns from models	Develops own methods of problem solving
May need some repetition to reinforce learning	Learns concepts permanently: is turned off by drill and repetition
Performs well in timed tests	Performs better in untimed situations
Can show work easily	Arrives at correct solutions intuitively
Masters other languages in classes	Masters other languages through immersion
Learns in spite of emotional reactions	Is very sensitive to teachers' attitudes
Is comfortable with one right answer	Generates unusual solutions to problems
Develops in a fairly even manner	Develops quite asynchronously
Usually maintains high grades	May have very uneven grades
Enjoys algebra and chemistry	Enjoys geometry and physics
Is an early bloomer	Is a late bloomer
Is academically talented	Is creatively, mechanically, technologically, or emotionally gifted

Appendix G:

Gifted Application for FY 2001

Gifted Program Requirements

Applicant Agency

_____

Gifted Application for FY 2001

Gifted Program Requirements

Applicant Agency

Please explain how you will meet or are currently fulfilling each requirement below. (Attach separate sheet(s) if necessary.)

1. Approved Scope and Sequence: According to your records, on what specific date was your scope and sequence first approved by the Arizona Department of Education? On what date(s) were revision(s) approved? (ARS § 15-770, § 15-772)

   First approved: _____

   Revisions approved: _____, _____, _____, _____, _____, _____

2. Program Evaluation: Please provide a brief description of how you will gather information for program evaluation. Please maintain this data in your files for future monitoring or self-monitoring activity.

   The following methods will be used to gather information for program evaluation:

3. Program Description: Please provide a brief description of proposed activities and the expected impact on students. Activities and/or materials must strengthen or supplement services to gifted students. (ARS § 15-770, § 15-772)

   The following activities will be used: ***Their expected impact is:***

Revised 8/3/00

Gifted Application for FY 2001

Student Ethnicity Report/Attachment A

Applicant Agency:

_____

	1999-2000	
	Total Number **District Wide**	**Total Number Gifted Students**
White, not Hispanic		
Black, not Hispanic		
Hispanic		
American Indian/Alaskan Native		
Asian or Pacific Islander		
Total Year End Enrollment		

Please include the above referenced pupil count data along with the FY 2001 application materials.
Revised 8/3/00

Gifted Education Personnel

Applicant Agency: _____

(Use additional sheet if necessary.)

		Gifted Endorsement (Place an X in the appropriate box.)			
Name	**Social Security No.**	**Provisional**	**Regular**	**Working Toward**	**Majors** (Examples: Ele. Ed., Sec. Ed., Spec. Ed., etc.)

Teacher of Gifted Gender Status

Number of Males_____
Number of Females_____

List number of teachers of the Gifted by Ethnicity for School Year 2000-2001.

White, not Hispanic	
Black, not Hispanic	
Hispanic	
American Indian/Alaskan Native	
Asian or Pacific Islander	
Total	

Additional Teachers Needed (List number needed) _____

Percent of teaching time needed to fully serve students **(place an X in appropriate box)**

None	¼ time	½ time	¾ time	1 full-time	List number needed if 2 or more

Revised 8/3/0

Appendix H

Recommended Skills for Teachers of Gifted Students

GIFTED SKILLS REQUIREMENTS
(RT-2-605.I-L) (Effective July 1, 1987)

Classroom management

- ∃ Demonstrates skill in using appropriate methods for teaching the gifted at the elementary or secondary levels.
- ∃ Identifies and describes the characteristics, strengths, and weaknesses of major teaching-learning models used in gifted education.
- ∃ Paces instruction based on the learning needs of gifted students.

Curriculum and instruction

- ∃ Demonstrates ability to develop and implement curriculum for elementary or secondary programs for the gifted.
- ∃ Identifies and describes a step-by-step process for curriculum development for the gifted
- ∃ Selects key ideas, concepts, and methods in the academic discipline.
- ∃ Selects appropriate objectives for critical, productive, and higher level thinking skill development.
- ∃ Identifies and implements teaching strategies for the major types of research procedures.
- ∃ Identifies and implements teaching strategies for problem-solving techniques (e.g., creative, logical, critical).
- ∃ Designs an appropriate sequence for content and skills objectives.
- ∃ Constructs curriculum that builds on and extends the regular curriculum while avoiding repetition; develops broad conceptual understanding of learning.
- ∃ Uses the major teaching-learning models with the gifted.
- ∃ Selects or develops, and uses teaching materials appropriate for the gifted.
- ∃ Identifies and described characteristics, strengths, and weaknesses of major service-delivery models for gifted students.

Assessment, evaluation, and further research

- ∃ Demonstrates skills in testing, measurement, screening and identification of gifted students:
  - ∃ Identifies and describes categories of giftedness.
  - ∃ Identifies and describes tests and other instruments appropriate for screening, identification, and diagnosis of the various categories of giftedness, including tests for special populations of the gifted (e.g., ethnic minorities, limited English-proficient students, the economically disadvantaged, and individuals with a disabling condition)
  - ∃ Describes the issues involved in screening and identification of the gifted.
  - ∃ Identifies and uses ethical guidelines in administering, interpreting, and maintaining records of tests and results.
  - ∃ Uses tests appropriately.
  - ∃ Interprets tests and instruments appropriately.

- ∃ Demonstrates knowledge of research and evaluation of programs for the gifted:
  - ∃ Identifies the major research studies and results related to education of the gifted.
  - ∃ Describes the implications of research results for the development of programs for the gifted.
  - ∃ Identifies appropriate methods and demonstrates skill in evaluating the progress of gifted students.

- ∃ Growing and learning theories:
- ∃ Demonstrates knowledge and comprehension of the nature and needs of gifted students.
  - ∃ Recognizes and identifies common characteristics of gifted students.
  - ∃ Describes cognitive, emotional, and social development of the gifted.
  - ∃ Demonstrates knowledge of learning styles of gifted students.

Educational foundations:

- ∃ Demonstrates knowledge and comprehension of historical development of education far the gifted
- ∃ Identifies major influential individuals in the field of teaching the gifted and describes their contributions.
- ∃ Defines major concepts and terms related to education of the gifted.

Organization, administration, et al.:

- ∃ Demonstrates knowledge of national and state legislation, rules, and common law related to gifted programs:
  - ∃ Describes current federal and state legislation, rules, and case !aw governing gifted programs.
  - ∃ Describes appropriate procedures for implementing current legislation, rules, and common law in programs for the gifted.

- ∃ Demonstrates skill in career and academic advisement of the gifted:
  - ∃ Identifies the major problems faced by gifted students in academic, career, social, and emotional areas.
  - ∃ Uses appropriate methods for advising the gifted.
  - ∃ Identifies a variety of careers of interest to the gifted and the educational requirements necessary to enter those careers.
- ∃ Communicates with other teachers, administrators and parents regarding program and student-related issues.

Appendix I

Arizona Academic Standards

Taught Through

Future Problem Solving Activities

Key Arizona Standards: Language Arts (grades 1 - 3)

Standard 1: Reading

R-F3: Use reading comprehension strategies such as drawing conclusions, summarizing, making predictions, identifying cause and effect, and differentiating fiction from non-fiction.

R-F6: Read and comprehend consumer information such as forms, newspaper ads, warning labels and safety pamphlets.

Standard 2: Writing

W-Fl: Use the writing process, including generating topics, revising ideas, and editing, to complete effectively a variety of writing tasks.

PO 1. Generate topics through prewriting activities (e.g., brainstorming, webbing, mapping, drawing ...).
PO 2. Align purpose (e.g., to entertain, to inform, to communicate) with audience.

W-F4: Gather, organize and accurately, clearly and sequentially report information gained from personal observations and experiences such as science experiments, field trips, and classroom visitors.

W-E5: Locate, acknowledge and use several sources to write an informational report in their own words.

W-E6: Write well organized communications such as friendly letters, memos, and invitations, for a specific audience and with a clear purpose.

Key Arizona Standards: Language Arts (grades 4 - 5)

Standard 1: Reading

R-E2: Use reading strategies such as making inferences and predictions, summarizing, paraphrasing, differentiating fact from opinion, drawing conclusions, to comprehend written selections.

R-E3: Analyze selections of nonfiction
PO 4: making inferences about the events, settings, of the selection.

Standard 2: Writing

W-El: Use correct spelling, punctuation, capitalization, grammar and usage, along with varied sentence structure and paragraph organization, to complete effectively a variety of writing tasks.

W-E4: Write an expository essay that contains effective introductory and summary statements and fully develops the ideas with details, facts, examples, and descriptions.

W-E5: Write a report that conveys a point of view and develops a topic with appropriate facts, details, examples and descriptions from a variety of cited sources.

W-E6: Write formal communications, such as personal or business letters, messages, directions, and applications in an appropriate format and for a specific audience and purpose.

W-E8: Demonstrate research skills using reference materials such as a dictionary, encyclopedia, and thesaurus to complete effectively a variety of writing tasks.

Key Arizona Standards: Math (grades 4 - 5)

Standard 2: Data Analysis and Probability

Students use data collection and analysis, statistics, and probability to make valid inferences, decisions and arguments and to solve a variety of real-world problems.

2M-El: Construct, read, analyze and interpret tables, charts, graphs, and data plots.

2M-E2: Make valid inferences, predictions, and arguments based on statistical analysis.

Key Arizona Standards: Science (grades 4 - 5)

Standard 1: Science as Inquiry

Students understand and use the processes of scientific investigation and scientific ways of knowing. They are able to design, conduct, describe, and evaluate these investigations. They are able to understand and apply concepts that unify scientific disciplines.

1SC-E1: Analyze scientific reports from magazines, television or other media.

1SC-E4: Identify and refine questions from previous investigations.

Standard 3: Personal and Social Perspectives in Science and Technology

3SC-E1 Recognize how scientific knowledge, thinking processes, and skills are used in a variety of careers.

3SC-E2: Develop and use a systematic approach to analyze the risks associated with natural and biological hazards.

3SC-E3: Identify a specific need and propose a solution or product that addresses this need, taking into consideration various factors.

3SC-E4: Implement a proposed solution or design and evaluate its merit.

Additional standards from science as well as from social studies will be addressed through the content of selected issues.

Key Arizona Standards: Language Arts (grades 6 - 8)

Standard 1: Reading

Use reading strategies such as making inferences and predictions, summarizing, paraphrasing, differentiating fact from opinion, drawing conclusions.., to comprehend written selections.

PO 1. Identify the main ideas, critical and supporting details...
PO 2. Distinguish fact from opinion.
PO 5. Determine cause and effect relationships.

R-E3: Analyze selections of ... nonfiction... (making inferences about the events, setting of the selection.

PO 1. Describe the setting and its relationship to the selection.
PO 3. Draw defensible conclusions...

Standard 2: Writing

W-El: Use correct spelling, punctuation, capitalization, grammar and usage, along with varied sentence structure and paragraph organization, to complete effectively a variety of writing tasks.

W-E4: Write an expository essay that contains effective introductory and summary statements and fully develops the ideas with details, facts, examples, and descriptions.

PO 2. Use own words (except for quoted material) to develop ideas accurately and clearly with supporting details, facts, examples or descriptions.

W-E5: Write a report that conveys a point of view and develops a topic with appropriate facts, details, examples and descriptions from a variety of cited sources.

PO 3. Provide support through facts, details, examples or descriptions that are appropriate, directly related to the topic, and from a variety of cited sources.
PO 4. Use personal interpretation, analysis, evaluation, or reflection to evidence understanding of subject.

W-E6: Write formal communications, such as personal or business letters, messages directions, and applications in an appropriate format and for a specific audience and purpose.

W-E8: Demonstrate research skills using reference materials such as a dictionary, encyclopedia, and thesaurus to complete effectively a variety of writing tasks.

Key Arizona Standards: Math (grades 6-8)

Standard 2: Data Analysis and Probability

Use data collection and analysis, statistics, and probability to make valid inferences, decisions and arguments and to solve a variety of real-world problems.

2M-El: Construct, read, analyze and interpret tables, charts, graphs, and data plots.

2M-E2: Make valid inferences, predictions, and arguments based on statistical analysis.

2M-E4: Use counting strategies to determine all possible outcomes of a particular event (for FPSP this could include implementation and analysis of surveys)

Key Arizona Standards: Science (grades 6 - 8)

Standard 1: Science as Inquiry

Understand and use the processes of scientific investigation and scientific ways of knowing. They are able to design, conduct, describe, and evaluate these investigations. They are able to understand and apply concepts that unify scientific disciplines.

1 SC-E4: Identify and refine questions from previous investigations.

1SC-E6: Analyze scientific reports from magazines, television or other media.

Standard 3: Personal and Social Perspectives in Science and Technology

3SC-E1: Recognize how scientific knowledge, thinking processes, and skills are used in a variety of careers.

3SC-E2: Develop and use a systematic approach to analyze the risks associated with natural and biological hazards.

3SC-E3: Identify a specific need and propose a solution or product that addresses this need, taking into consideration various factors.

3SC-E4: Implement a proposed solution or design and evaluate its merit.

Additional standards from science as well as from social studies will be addressed through the content of selected issues.

Key Arizona Standards: Language Arts (grades 9 - 12)

Standard 1: Reading

R-PI: Apply reading strategies such as extracting, summarizing, clarifying, and interpreting information; predicting events and extending the ideas presented; relating new information to prior knowledge; supporting assertions with evidence; and making useful connections to other topics to comprehend works of literature and documents.

R-P4: Evaluate technical journals or workplace documents for purpose, organizational pattern, clarity, reliability, and accuracy, and relevance of information.

Standard 2: Writing

W-PI: Use transitional devises; varied sentence structures; the active voice parallel structures; supporting details, phrases and clauses; and correct spelling, punctuation, capitalization, grammar and usage to sharpen the focus and clarify the meaning of their writing.

W-P2: Write a persuasive essay (e.g., editorials, reviews, essays, critiques) that contains effective introductory and summary statements; arranges the arguments effectively; and fully develops the ideas with convincing proof, details, facts, examples and descriptions.

W-P5: Write formal communications, such as a resume, manuals and letters of application, in appropriate formats, for a definite audience and with a clear purpose.

Standard 3: Listening and Speaking

Students effectively listen and speak in situations, which serve different purposes and involve a variety of audiences

Standard 4: Viewing and Presenting

Students use a variety of visual media and resources to gather, evaluate and synthesize information and to communicate with others.

Key Arizona Standards: Math (grades 9-12)

Course: Algebra - Data Analysis and Probability

2M-P1: Construct and draw inferences, including measure of central tendency, from charts, tables, graphs, and data plots that summarize data from real world populations

2M-P2: Use appropriate technology (e.g., graphing calculators, computer software) to display and analyze data.

Course: Statistics - Data Analysis and Probability

2M-P4: Explain the effects of sampling on statistical claims and recognize misuses of statistics.

Key Arizona Standards: Science (grades 9 - 12)

Standard 1: Science as Inquiry

Students understand and use the processes of scientific investigation and scientific ways of knowing. They are able to design, conduct, describe, and evaluate these investigations. They are able to understand and apply concepts that unify scientific disciplines.

1SC-P1: Propose solutions to practical problems by synthesizing and evaluating information gained from scientific investigations

1SC-P3: Analyze and evaluate reports of scientific studies.

Standard 3: Personal and Social Perspectives in Science and Technology

3SC-P1: Apply scientific thought processes to personal and social issues.

Appendix J:

Distance Learning

Distance Learning

The phrase, "distance learning," at one time referred to correspondence schools. This mode of distance-based instruction still exists, but there are other, more personalized choices today such as the following:

Interactive television. Students travel to classrooms equipped with TV monitors with microphones at each desk. TV cameras connect them to their instructor, who views each classroom as a separate screen on a large-screen monitor. Visual and other overhead-type materials are transmitted to students via a televised pad camera. Handouts and assignments are exchanged via regular mail or FAX.

World-Wide-Web-based Instruction. Learning materials, assignments and classroom discussion areas take the form of Web pages on the Internet. Students can download and print out their learning materials, organize them for use, and can interact with the instructor via e-mail, and post messages to a 'bulletin board' for all class members to read. Some Web classrooms have 'real-time' interaction areas. Students and instructor log on to the site at an agreed-upon time, navigate to a classroom area in cyberspace, and interact by typing. A message typed by one student is seen by all. Participants may save a log of the proceedings -- the equivalent of a tape-recorded class discussion.

Audio-enhanced Instruction. Some courses now allow the students and instructor, at different locations, to interact via the equivalent of a telephone conference call. Usually a toll-free number is provided to each participant so that he or she may call in to a central location.

Some distance-mediated classrooms today are combinations of one or more of these types.

Sample Uses for Distance-Based Learning

Undergraduate and graduate degree programs. Students may take a single course, several courses, or complete an undergraduate or graduate degree program.

Self-enrichment courses. Non-credit courses in virtually every topic, free or fee-based, are offered by individuals, schools, non-profit institutions, and businesses.

K-12 curricular activities. Students use the Internet and other technological innovations for correspondence with others around the globe, searches for information via Web browsers, collaborating with peers, publishing their creative products, building and maintaining web pages, or participating in formal study programs.

Distance Learning and Gifted Students

Accelerated Courses and Programs. Gifted students, or students who live in remote areas may use the world-wide web for access to learning opportunities designed specifically to meet their needs for appropriately differentiated education. Courses may be offered through recognized educational institutions that have programs for gifted students, (e.g., *Educational Programs for Gifted Youth* at Stanford University, *Center for Talented Youth* at Johns Hopkins University, *Gifted Development Center* at Northwestern University), and at universities and colleges around the world, as well as at non-traditional educational organizations. Distance learning may be a valuable option for gifted students when one or more of the following conditions exist.

- Gifted students, or a gifted instructor, are located in relatively isolated or rural areas

- Gifted students or instructors are challenged. For example, hearing-impaired persons have found Web-based classrooms to be a boon to their learning, since they can study and interact solely in the visual environment.

- Students are highly or exceptionally gifted and appropriate learning opportunities are not available in their schools or communities.

- A mentor, qualified to work with a highly gifted student on advanced study or on complex projects, lives far away or has limited time available for collaboration.

Conditions for Success. Students, and their advisors, should consider individual learning style and preferences carefully before making a decision to engage in distance learning. The following questions must be considered:

- Is the student ***self-directed****?* Distance-based learning environments, particularly the Internet, require exceptional levels of *motivation* and *ability to self-pace*. Students in distance-based classrooms are not 'left adrift' without access to their instructor. Many students feel they have greater access to their instructor -- in essence, a one-to-one learning partnership. At the same time, students must meet deadlines and initiate contact with the instructor if they need help.

- Is the student ***a visual learner****?* The student who prefers to learn by reading, thinking through what has been read, and trying to relate it to other learning, is most successful in distance learning. Auditory learners, who prefer to hear an instructor's lecture and actively participate in discussions among students and instructor, may have more difficulty with the format of distance learning.

- Is the student ***a good "lone wolf?"*** Students who enjoy working independently will adapt well to distance learning; students who need social interaction will not be as successful.

- Is the student ***technologically proficient***? Does he or she know how to send and receive e-mail and how to access sites on the Internet? Is the student comfortable with interactive television -- the eye of a TV camera and a microphone that must be carefully attended to?

- Is the student's personal learning style one which fits with distance education? A particularly good resource for identifying personal learning style is an online self-scoring survey, "Is Distance Education for Me?" developed in 1999 by the Western Governors' University Distance Education Consortium. The test taker completes a one-page survey online, and then clicks on a second page to discover whether distance learning is a good fit for his or her learning style. This easy-to-use, free resource can be found at http://www.wgu.edu/wgu/self_assessment.asp

Almost any change involves a willingness to take risks and learn from experience. Gifted students who are open to the possibilities of expanding their learning environment to include all of cyberspace, have virtually unlimited opportunities to find learning opportunities that will match their needs and interests.

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